

**FIRST FIVE-YEAR REVIEW REPORT FOR
STATE MARINE OF PORT ARTHUR SUPERFUND SITE
JEFFERSON COUNTY, TEXAS**

September 2012



Prepared by

**U.S. Environmental Protection Agency
Region 6
Dallas, Texas**

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
LIST OF TABLES	iii
LIST OF ACRONYMS	iv
EXECUTIVE SUMMARY	1
1.0 INTRODUCTION	1
2.0 SITE CHRONOLOGY	3
3.0 BACKGROUND	4
3.1 PHYSICAL CHARACTERISTICS	4
3.2 LAND AND RESOURCE USE	5
3.3 HISTORY OF CONTAMINATION	6
3.4 INITIAL RESPONSE	6
3.5 BASIS FOR TAKING ACTION	7
4.0 REMEDIAL ACTIONS	8
4.1 SELECTED REMEDY	8
4.2 REMEDY IMPLEMENTATION	9
4.3 OPERATION AND MAINTENANCE	10
4.4 OPERATION AND MAINTENANCE COST	10
5.0 PROGRESS SINCE THE PREVIOUS FIVE-YEAR REVIEW	10
6.0 FIVE-YEAR REVIEW PROCESS	10
6.1 ADMINISTRATIVE COMPONENTS	10
6.2 COMMUNITY INVOLVEMENT	11
6.3 DOCUMENT REVIEW	11
6.4 DATA REVIEW	11
6.5 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENT REVIEW ..	17
6.6 SITE INSPECTION	18
6.7 SITE INTERVIEWS	19
7.0 TECHNICAL ASSESSMENT	19
7.1 QUESTION A: IS THE REMEDY FUNCTIONING AS INTENDED BY THE DECISION DOCUMENTS? yes.	19
7.2 QUESTION B: ARE THE ASSUMPTIONS USED AT THE TIME OF REMEDY SELECTION STILL VALID? NO.	20
7.3 QUESTION C: HAS ANY OTHER INFORMATION COME TO LIGHT THAT COULD CALL INTO QUESTION THE PROTECTIVENESS OF THE REMEDY? YES.	21
7.4 TECHNICAL ASSESSMENT SUMMARY	21
8.0 INSTITUTIONAL CONTROLS	21
8.2 EFFECT OF FUTURE LAND USE PLANS ON INSTITUTIONAL CONTROLS	22
8.3 PLANS FOR CHANGES TO SITE CONTAMINATION STATUS	22
9.0 ISSUES	22
10.0 RECOMMENDATIONS AND FOLLOW-UP ACTIONS	24
11.0 PROTECTIVENESS STATEMENT	26
12.0 NEXT REVIEW	26

ATTACHMENTS

- 1 Site Location Map, Site Layout Map, and Site Sampling Locations Map
- 2 Announcement of the First Five-Year Review
- 3 Documents Reviewed
- 4 Statistical Analysis
- 5 Offshore Sediment Sampling Analytical Data Reports
- 6 Dredge Material Lab Report
- 7 Dredge Permit
- 8 Site Visit Checklist
- 9 Site Inspection Photographs
- 10 Interview Records – Site Surveys
- 11 Institutional Controls – Restrictive Covenants

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	CHRONOLOGY OF SITE EVENTS.....	3
2	RCRA METALS/TPH ANALYTICAL RESULTS OF DREDGE MATERIAL.....	16
3	TCLP ANALYTICAL RESULTS OF DREDGE MATERIAL.....	17
4	ISSUES IDENTIFIED	23
5	RECOMMENDATIONS AND FOLLOW-UP ACTIONS.....	24

LIST OF ACRONYMS

AST	Aboveground storage tanks
ARAR	Applicable or relevant and appropriate requirements
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	Constituents of concern
yd ³	Cubic yard
DDD	dichlorodiphenyldichloroethane
DDT	dichlorodiphenyltrichloroethane
EA	EA Engineering, Science, and Technology, Inc.
EPA	U.S. Environmental Protection Agency
FS	Feasibility study
gal	Gallon
HHRA	Human Health Risk Assessment
IC	Institutional controls
IUR	Inhalation unit risk
µg	Microgram(s)
mg	Milligram(s)
mg/kg	Milligram(s) per kilogram
NBI	New Birmingham Inc.
NBR	New Birmingham Resources Maritime II, LLC
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operations and Maintenance
OSWER	Office of Solid Waste and Emergency Response
PAH	Polynuclear aromatic hydrocarbons
PBL	Palmer Barge Line
PCB	Polychlorinated biphenyls
PRP	Potentially Responsible Party
RA	Remedial Action
RAO	Remedial action objective
RCRA	Resource Conservation and Recovery Act
RFD _o	Reference dose oral
RFC _i	Reference concentration inhalation
RI	Remedial investigation
ROD	Record of Decision
RSL	Regional Screening Level
SARA	Superfund Amendments and Reauthorization Act
SFo	Oral cancer slope factor
Site	State Marine of Port Arthur Superfund Site
SLERA	Screening Level Ecological Risk Assessment
SMPA	State Marine of Port Arthur
SVOC	Semi-volatile organic compounds

TCEQ	Texas Commission on Environmental Quality
TCLP	Toxicity Characterization Leaching Procedure
TDH	Texas Department of Health
TDWR	Texas Department of Water Resources
TNRCC	Texas Natural Resource Conservation Commission
TPH	Total petroleum hydrocarbons
TRRP	Texas Risk Reduction Program
Tubal-Cain	Tubal-Cain Marine Services
95% UCLM	Ninety-five percent upper confidence limit of the mean
VOC	Volatile organic compounds

EXECUTIVE SUMMARY

The U.S. Environmental Protection Agency Region 6 (EPA) has conducted the first five-year review of the Remedial Action (RA) implemented at the State Marine of Port Arthur (SMPA) Superfund Site (site) in Port Arthur, Jefferson County, Texas. This First Five-Year Review Report documents the results of the review for the SMPA site, which was conducted in accordance with EPA guidance (EPA 2001) on five-year reviews.

The site was a former municipal landfill, a marine vessel and barge cleaning and repair facility, and a processor of waste oils. In 1974 the landfill was closed, its contents (i.e., municipal solid wastes) are still present on site as they were covered in place by 2 feet of sediment during landfill closure activities. During the operation of the State Marine facilities, typical activities performed at the site included cleaning, degassing, maintenance, repair, and inspection of barges and other marine vessels. Improper use and construction of facilities resulted in elevated levels of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and metals at the site.

Following TCEQ site investigations, in September 2000, EPA's contractor mobilized to SMPA to perform a Time Critical Removal Action (Weston 2001). Activities included clearing dense vegetation and the removal of drums, air cylinders, machine batteries, aboveground storage tanks (ASTs), vessels, and other waste materials from the site.

In April 2003, the RI report was completed and in July 2005, the FS report was completed. These reports were followed by the announcement of the Proposed Plan for the SMPA site on July 27, 2005. In October 2006, the Supplemental RI report was completed.

Results of the Screening Level Ecological Risk Assessment (SLERA) indicate that selenium concentrations in offshore sediments may pose a risk to benthic invertebrates. However, soil and groundwater data do not indicate a selenium pathway exists from the site to the offshore sediments as a potential source of selenium contamination.

The Record of Decision (ROD) was signed on April 18, 2007. The selected remedy for the site was institutional control in the form of a restrictive covenant and no further action. The site was deleted from the National Priorities List on February 6, 2012.

Issues noted during this five year review include the following:

1. **Sediment Sample Screening Criteria Exceedance**—Elevated concentrations of metals and dichlorodiphenyltrichloroethane (DDT) observed in offshore sediment samples collected from Sabine Lake offshore of the site in December 2011 could have a potential to cause ecological impact.
2. **Onsite Placement of Offshore Dredge Material**—In 2011, the tenants leasing the property at the SMPA site dredged materials (e.g., sediment, shells, iron scraps) from offshore of the SMPA and PBL sites. Approximately 14,000 cubic yards (yd³) of dredge material has been placed directly on the ground surface of the southern portion of the SMPA site. This material covers an area of 138,000 square feet (approximately 3.0 acres) of the SMPA site. This dredge material is not part of the selected remedy and should not be considered in determining whether the implemented remedy selected in the ROD is protective. This material will be considered separately and a determination will be made concerning whether it presents a new risk to human health and/or ecological receptors.

Recommendations and follow up actions are listed below and included on Table 5 and include party responsible and milestone date:

1. **Sediment Sample Screening Criteria Exceedance**—The 95 percent upper confidence limit of the mean concentrations of arsenic, barium, copper, nickel, and DDT exceed ecological screening criteria. This data indicates that potential for ecological impact exists in the offshore sediments. Additional evaluation and assessment of the sediment data collected in December 2011 should be conducted to determine if site related material presents an unacceptable risk to ecological receptors.
2. **Onsite Placement of Offshore Dredge Material**—Representative samples of the dredge material on the SMPA site should be collected and analyzed to determine if this surface material presents an unacceptable risk to human health and/or ecological receptors. This dredge material is not part of the selected remedy and should not be considered in determining whether the implemented remedy selected in the ROD is protective. This material will be considered separately and a determination will be made concerning whether it presents a new risk to human health and/or ecological receptors.

Determinations

Based on the information available during the first five-year review, the selected remedy for the State Marine of Port Arthur Superfund Site appears to be performing as intended and is protective of human health and the environment.

Pamela Phillips *PP*

9/12/12

Pamela Phillips, Acting Director
Superfund Division, Region 6
U.S. Environmental Protection Agency

Date

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: State Marine of Port Arthur Superfund Site (SMPA site)		
EPA ID: TXD099801102		
Region: 6	State: TX	City/County: Port Arthur/Jefferson County
SITE STATUS		
NPL Status: Final		
Multiple OUs? No	Has the site achieved construction completion? Yes	
REVIEW STATUS		
Lead agency: EPA If “Other Federal Agency” was selected above, enter Agency name: Click here to enter text.		
Author name (Federal or State Project Manager): Rafael Casanova		
Author affiliation: EPA		
Review period: September 2011 – April 2012		
Date of site inspection: November 10, 2011		
Type of review: Policy		
Review number: 1		
Triggering action date: April 18, 2007		
Due date (<i>five years after triggering action date</i>): April 18, 2012		

Five-Year Review Summary Form (continued)

Issues/Recommendations	
OU(s) without Issues/Recommendations Identified in the Five-Year Review:	
None.	

Issues and Recommendations Identified in the Five-Year Review:				
OU(s): Site	Issue Category: Remedy Performance			
	Issue: Sediment Sample Screening Criteria Exceedance—Elevated concentrations of metals and DDT observed in offshore sediment samples collected from Sabine Lake offshore of the site in December 2011 could have a potential to cause ecological impact.			
	Recommendation: The 95% upper confidence limit of the mean concentrations of arsenic, barium, copper, nickel, and DDT exceed ecological screening criteria. This data indicates that potential for ecological impact exists in the offshore sediments. Additional evaluation and assessment of the sediment data collected in December 2011 should be conducted to determine if site related material presents an unacceptable risk to ecological receptors.			
Affect Current Protectiveness	Affect Future Protectiveness	Implementing Party	Oversight Party	Milestone Date
Cannot be determined at this time	Cannot be determined at this time	PRP/Owner	EPA/State	September 2013

OU(s): Site	Issue Category: Changed Site Conditions			
	Issue: Onsite Placement of Offshore Dredge Material—In 2011, the tenants leasing the property at the SMPA site dredged materials (e.g., sediment, shells, iron scraps) from offshore of the SMPA and PBL sites. Approximately 14,000 cubic yards of dredge material has been placed directly on the ground surface of the southern portion of the SMPA site. This material covers an area of 138,000 square feet (approximately 3.0 acres) of the SMPA site.			
	Recommendation: Representative samples of the dredge material on the SMPA site should be collected and analyzed to determine if this surface material presents an unacceptable risk to human health and/or ecological receptors. This dredge material is not part of the selected remedy and should not be considered in determining whether the implemented remedy selected in the ROD is protective. This material will be considered separately and a determination will be made concerning whether it presents			

	a new risk to human health and/or ecological receptors.			
Affect Current Protectiveness	Affect Future Protectiveness	Implementing Party	Oversight Party	Milestone Date
No	No	Owner	EPA/State	September 2013

Five-Year Review Summary Form (continued)

Protectiveness Statement	
<i>Protectiveness Determination:</i> Protective	<i>Addendum Due Date (if applicable):</i> Click here to enter date.
<i>Protectiveness Statement:</i> Based on the information available during the first five-year review, the selected remedy for the State Marine of Port Arthur Superfund Site appears to be performing as intended and is protective of human health and the environment.	

1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) Region 6 has conducted a five-year review of the Remedial Action (RA) implemented at the State Marine of Port Arthur (SMPA) Superfund Site (site), located in Port Arthur, Jefferson County, Texas. The purpose of a five-year review is to determine whether the remedy at a site remains protective of human health and the environment and to document the methods, findings, and conclusions of the five-year review in a five-year review report. Five-year review reports identify issues found during each review, if any, and make recommendations to address the issues. This First Five-Year Review Report documents the results of the review for the SMPA site, conducted in accordance with EPA guidance (EPA 2001) on five-year reviews.

The five-year review process is required by federal statute. EPA must implement five-year reviews consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). CERCLA Section 121(c), 42 U.S.C. § 9621(c), states the following:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

NCP Section 300.430(f)(4)(ii) states the following:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

The EPA five-year review guidance further states that a five-year review should be conducted for the following types of actions:

- A pre-Superfund Amendments and Reauthorization Act (SARA) RA that leaves hazardous substances, pollutants, or contaminants onsite above levels that allow for unlimited use and unrestricted exposure.
- A pre- or post-SARA RA that, once completed, will not leave hazardous substances, pollutants, or contaminants onsite above levels that allow for unlimited use and unrestricted exposure but will require more than five years to complete.
- A removal-only site on the National Priorities List (NPL) where the removal action leaves hazardous substances, pollutants, or contaminants onsite above levels that allow for unlimited use and unrestricted exposure and no RA has or will be conducted.

Because hazardous substances, pollutants, or contaminants remain at the SMPA site above levels that allow for unlimited use and unrestricted exposure, a five-year review is required.

This is the first five-year review for the SMPA Superfund site. The period addressed by this five-year review extends from April 2007 to April 2012. The first five-year review was conducted from September 2011 through April 2012 and its methods, findings, conclusions, and recommendations are documented in this report.

The summary of issues and recommendations, and a summary of all required protectiveness determinations discussed in this report are presented in the Five-Year Review Summary Form, included before Section 1.0 of this report.

This report documents the five-year review for the SMPA site by providing the following information: site chronology (Section 2.0), background information (Section 3.0), overview of the RA (Section 4.0), progress since the previous five-year review (Section 5.0), discussion of the first five-year review process (Section 6.0), technical assessment of the site (Section 7.0), institutional controls (Section 8.0), issues (Section 9.0), recommendations and follow-up activities (Section 10.0), protectiveness statement (Section 11.0), and discussion of the next review (Section 12.0). Attachment 1 provides the site location map, the site layout map, and the sampling locations map. Attachment 2 provides a copy of the Five-Year Review Public Notice. Attachment 3 is a list of documents reviewed. Attachment 4 provides a table of statistical analysis. Attachment 5 provides December 2011 offshore sediment sampling analytical data

reports. Attachment 6 provides analytical data from samples collected during dredging. Attachment 7 contains a permit for dredging activities. Attachment 8 provides the Site Inspection Checklist. Attachment 9 provides the site inspection photographs. Attachment 10 provides the interview records. Attachment 11 provides a copy of the Restrictive Covenants associated with the SMPA and PBL sites.

2.0 SITE CHRONOLOGY

A chronology of site events for the SMPA site is provided in Table 1. Additional historical information for the site is available online at

<http://www.epa.gov/earth1r6/6sf/pdffiles/0602444.pdf> (EPA 2011).

TABLE 1
CHRONOLOGY OF SITE EVENTS

Date	Event
1898–1920	Sabine-Neches canal construction, dredge material from canal construction was used to build the Pleasure Islet island
1955–1957	Pleasure Islet western canal abandoned, new canal construction on the eastern and southern sides of Pleasure Islet
1957	Construction of a land bridge to Pleasure Islet
1963–1969	Site used by the City of Port Arthur as an incineration pit and municipal landfill
1969–1972	Central and northern portion of the site used as a waste disposal location for the municipal landfill
1972–1974	Limited waste disposal activity at the site, operations concentrated in the northern portions of Pleasure Islet
December 1974	City of Port Arthur closed the landfill by placing approximately 2 feet of fine-grained dredge material on the surface
1974	State Welding, Marine Works, and Golden Triangle Shipyard begin operations at the site
1980	Lauren Refining Company begins operations at the site
1980–1983	Inspections of the site performed by TNRCC
1995–1996	TNRCC conducted an Expanded Site Investigation
July 28, 1998	SMPA added to the National Priorities List

Date	Event
1999	Public Health Assessment completed
2000-2001	Time Critical Removal Action conducted to remove source materials stored onsite
2001-2003	Remedial Investigation conducted
2005	Focused Feasibility Study Completed
2006	Supplemental Remedial Investigation conducted
April 18, 2007	Record of Decision signed, the trigger date for the First FYR
June 22, 2007	Preliminary Close Out Report submitted
March 3, 2011	Restrictive Covenant placed on site
March 22, 2011	EPA completes NPL Site Deletion Data Collection Form
September 15, 2011	Amended Final Close Out Report Submitted
December 2011	Offshore sediment sampling conducted
September 2011 – April 2012	First FYR conducted
February 6, 2012	The site was deleted from the National Priorities List
NOTE: EPA U.S. Environmental Protection Agency FYR Five-Year Review TNRCC Texas Natural Resource Conservation Commission NPL National Priorities List SMPA State Marine of Port Arthur	

3.0 BACKGROUND

This section discusses the site's physical characteristics, land and resource use near the site, history of site contamination, initial response to the site, and the basis for the response.

3.1 PHYSICAL CHARACTERISTICS

The SMPA site is located approximately 4.5 miles east-northeast of the City of Port Arthur, in Jefferson County, Texas, on Old Yacht Club Road on Pleasure Islet, a peninsula located approximately 0.5-mile southwest of the confluence of the Neches River and the Sabine Neches Barge Canal. The site is bounded to the north by the Palmer Barge Line (PBL) Superfund Site,

to the west by Old Yacht Club Road, to the south by Pleasure Islet LLC, an industrial facility, and to the east by Sabine Lake.

3.2 LAND AND RESOURCE USE

In 1955, the State of Texas transferred ownership of Pleasure Islet to the City of Port Arthur. The site, along with the adjacent property to the north, was used as a municipal solid waste landfill by the City of Port Arthur beginning in 1963. Disposal activities at the landfill included both incineration of waste, which ended in 1969, and trench land filling, which ended in 1974. The landfill was formally closed in accordance with Texas Department of Health regulations in December 1974.

Specific details regarding time frames of operation at the site are unclear during the mid-1970s through 1990s. However, historical documents indicate that from approximately 1974 to 1988, State Welding and Marine Works (also known as State Marine) and the Golden Triangle Shipyard operated at the site. Around 1980, the Lauren Refining Company (also referred to as the Lauren Tank Farm), owned by State Marine, started operations on the southern portion of the site. Operations at the site included marine salvage and repair, and off-loading, bulk storage, and processing of waste oil for conversion into bunker fuels. Operations at the site ceased during the late 1980s and the site was inactive until 2011.

The current land owner is New Birmingham Resources Maritime II, LLC (NBR; also known as New Birmingham Inc. [NBI]). The current tenant, which began operations at the site in early 2011, is Tubal-Cain Marine Services, a Tubal-Cain Company (Tubal-Cain). At present, the site is used for industrial purposes as a barge cleaning facility. A site location map (Figure 1) and site layout map (Figure 2) are provided in Attachment 1.

3.3 HISTORY OF CONTAMINATION

As previously stated, the site was a former municipal landfill, a marine vessel and barge cleaning and repair facility, and a processor of waste oils. In 1974 the landfill was closed, its contents (i.e., municipal solid wastes) are still present on site as they were covered in place by 2 feet of sediment during landfill closure activities. During the operation of the State Marine facilities, typical activities performed at the site included cleaning, degassing, maintenance, repair, and inspection of barges and other marine vessels. Operations included 2 acres of unlined-earthen wastewater impoundments used to store oil and barge cleaning wastewater, in addition to an old ship, located on land that was used as an oil/water separator. Operations at the site evolved to include three aboveground storage tanks (ASTs), one 20,000 barrel tank, two 10,000 barrel tanks, a flare, and a distillation column. Improper use and construction of facilities resulted in elevated levels of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and metals at the site.

Contamination at the site was discovered in 1983 as the result of an anonymous call to the Texas Department of Water Resources (TDWR), predecessor of the Texas Natural Resource Conservation Commission (TNRCC) the predecessor of the Texas Commission on Environmental Quality (TCEQ). The caller reported that barges of toxic waste were to be pumped into Sabine Lake that evening. TDWR personnel conducted an evening inspection which included the observation and documentation of discharges of barge waste into Sabine Lake.

3.4 INITIAL RESPONSE

In 1995, TNRCC conducted an investigation to develop an understanding of site contaminants, sources, potential migration pathways, exposure pathways, and potential human health and ecological receptors. A series of investigations were completed that resulted in the production of an Expanded Site Investigation Report and a Hazardous Ranking System Documentation Report. The results presented within these documents resulted in the site being proposed to the NPL on March 6, 1998. SMPA was added to the NPL in a file rule published on July 28, 1998.

On September 4, 2000, EPA's contractor mobilized to SMPA and the adjacent PBL site to perform a Time Critical Removal Action (Weston 2001). Preliminary activities on the SMPA site included clearing dense vegetation and collection of drums, air cylinders, and heavy machine batteries into the staging area. Activities for both sites consisted of the removal and disposal of all liquids in ASTs and other vessels on site, as well as the decontamination of the ASTs and other vessels. A total of 189,564 gallons (gal) of recyclable oil was sent for fuel blending. A total of 61,111 gal of material consisting of 35,000 gal of styrene, 5,361 gal of oil, and 20,750 gal of hazardous oil/water mixed with solids was sent for incineration. A total of 265,987 gal of water, collected and treated during the removal action, was transported offsite for disposal by means of deep well injection. A total of 330 cubic yards (yd³) of solidified sludge was disposed of by means of incineration. All wastes were shipped offsite by January 2, 2001. Following the completion of the Time Critical Removal Action, the site was restored back to its original state (Weston 2001).

In April 2003, the Remedial Investigation (RI) report was completed and in July 2005, the Feasibility Study (FS) report was completed. These reports were followed by the announcement of the Proposed Plan for the SMPA site on July 27, 2005. In October 2006, the Supplemental RI report was completed.

3.5 BASIS FOR TAKING ACTION

Throughout the investigations conducted at the site, a number of VOCs, SVOCs, pesticides, PCBs, and metals were detected. The majority of contaminants were removed from the site during the Time Critical Removal Action.

Conclusions from the Human Health Risk Assessment (HHRA) as noted in the Record of Decision (ROD) (EPA 2007) are as follows:

- No soil constituents of concern (COCs) were identified in the human health risk assessment. Therefore, no remedial action is warranted for site soils.
- Three sediment COCs (copper, zinc, and Aroclor 1242) were identified in the HHRA based on conservatively modeled edible fish tissue uptake from Lake Sabine. However, the modeled fish tissue concentrations used in the HHRA were much higher than the measured fish tissue concentrations from Lake Sabine as reported by the Texas

Department of Health (TDH). Therefore, the realistic impacts of sediment on edible fish tissue are expected to have been overestimated in the HHRA as discussed in the Uncertainty Assessment. The TDH fish tissue concentrations from the TDH study are expected to better represent the current and future edible fish tissue concentrations that fishers may encounter in Lake Sabine. Therefore, no remedial action is warranted for sediment on the basis of human health impacts.

Conclusions from the Ecological Risk Assessment as noted in the ROD (EPA 2007) are as follows:

- Selenium concentrations were detected at [a] level that could potentially present a risk to ecological receptors. Selenium concentrations encountered in site soils do not indicate that they are the source for the elevated levels found in the sediment samples. Although the selenium concentrations are above screening levels, they are not at concentrations that would warrant remedial action.

4.0 REMEDIAL ACTIONS

The ROD for the site was signed on April 18, 2007; details of the selected remedy are included in this section.

4.1 SELECTED REMEDY

The remedial action objectives (RAOs) as stated in the Amended Final Close Out Report (EPA 2011) are as follows:

- Prevent exposure to contaminated soil/sediment via ingestion, inhalation, or dermal contact that would result in excess carcinogenic risk of 1.0×10^{-5} or a Hazard Index of 1.0.
- Prevent exposure of contaminated soil/sediment to aquatic or terrestrial organisms via direct contact or indirect ingestion of bioaccumulative chemicals that would result in a Hazard Quotient of 1.0.
- Prevent or minimize migration of soil contaminants to groundwater.
- Prevent or minimize further migration of soil and sediment contaminants to surface water that could result in exceedance of ambient water quality criteria.

The major components of the selected remedy included:

- Implementation of institutional controls (ICs) to restrict future land use to industrial purposes only. The institutional control shall be a restrictive covenant by the property owner, to the benefit of the State of Texas and the United States Government, recorded in the real property records of Jefferson County, Texas.
- No Further Action, the EPA completed a Time Critical Removal Action in August 2001 that addressed site contamination that posed a risk to human health and the environment.

4.2 REMEDY IMPLEMENTATION

Since the signing of the ROD, implementation of ICs to restrict future land use to commercial/industrial purposes have been implemented. Three Restrictive Covenants associated with the SMPA site were filed with the Jefferson County Clerk's Office and included in Attachment 11 (see discussion in Section 8):

- Restrictive Covenant for 24.178 Acre Tract– File No. 2011010068, Official Public Records filed and recorded on March 25, 2011 at 10:44 a.m. with Carolyn L. Guidry, County Clerk, Jefferson County, Texas.
- Restrictive Covenant for 1.395 Acre Tract– File No. 2011010069, Official Public Records filed and recorded on March 25, 2011 at 10:44 a.m. with Carolyn L. Guidry, County Clerk, Jefferson County, Texas.
- Restrictive Covenant for 8.926 Acre Tract– File No. 2011010070, Official Public Records filed and recorded on March 25, 2011 at 10:44 a.m. with Carolyn L. Guidry, County Clerk, Jefferson County, Texas.

The acreage identified above is greater than the original 17 acres historically identified for the SMPA site. NBR, the current property owner, filed for restrictive covenants which cover their entire property which includes not only the SMPA site property, but also the PBL site property and the property located to the north of the PBL site.

4.3 OPERATION AND MAINTENANCE

Operation and maintenance activities include monitoring effectiveness of ICs to ensure land use remains industrial/commercial.

4.4 OPERATION AND MAINTENANCE COST

The only costs identified during the five-year review period consist of filing fees associated with implementing IC (i.e., Restrictive Covenants). Individual charges of \$36.00 each were identified for File No. 2011010068 and File No. 2011010069, while a charge of \$32.00 was identified for File No. 2011010070.

5.0 PROGRESS SINCE THE PREVIOUS FIVE-YEAR REVIEW

This is the first five-year review for the SMPA site.

6.0 FIVE-YEAR REVIEW PROCESS

This section presents the process and findings of the five-year review including the document review, data review, Applicable or Relevant and Appropriate Requirements (ARAR) review, site inspection, and interviews.

6.1 ADMINISTRATIVE COMPONENTS

This first five-year review was led by Mr. Rafael Casanova, EPA Remedial Project Manager for the SMPA site. TCEQ, NBI, and EA personnel assisted in the review process. Representatives from TCEQ were Ms. Olga Salinas, Region 10 Superfund Project Manager and Mr. Derek Eades, Region 10 Waste Section Manager. NBI team members included Mr. Rick Bailey, NBI Manager, and Mr. Wes Penn, Environmental Planning and Permitting. EA's team members included Mr. Stan Wallace, Ms. April Ballweg, and Ms. Sheena Styger.

In September 2011, the review team established the review schedule, which included the following components:

- Document review
- Community involvement
- Site inspection
- Interviews
- ARARs review
- Offshore sediment sampling
- Data review
- Five-year review report development and review.

6.2 COMMUNITY INVOLVEMENT

A public notice announcing the initiation of the five-year review was published in the local newspaper, *The Port Arthur News* on October 9, 2011. A copy of the Public Notice and the affidavit of publication are provided in Attachment 2.

Upon signature, a copy of the First Five-Year Review Report will be available online at <http://www.epa.gov/superfund/cleanup/postconstruction/5yr.htm> and at the following information repositories: (1) EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202; and (2) Port Arthur Public Library repository, 4615 9th Avenue, Port Arthur, Texas 77642.

6.3 DOCUMENT REVIEW

The five-year review included a review of relevant decision documents, implementation documents, remedy performance documents, and legal documents. The review included; (1) RI/FS Reports, (2) Supplemental RI, (3) ROD, (4) Preliminary Close Out Report, and (5) Restrictive Covenants. Complete references for all the documents reviewed are provided in Attachment 3.

6.4 DATA REVIEW

Chemical concentrations in offshore sediment were evaluated as part of the five-year review to determine the potential need for additional ecological evaluation based on changes in benchmarks or changes in site conditions (Attachments 4 and 5). Evaluation utilized chemical

analytical data collected from 18 offshore surface sediment samples collected at the SMPA site during December 2011. Samples were analyzed for metals, VOCs, SVOCs, polynuclear aromatic hydrocarbons (PAH), PCBs, and pesticides. Metal and VOC data were analyzed at the EPA Region 6 Laboratory in Houston, Texas. SVOC, PAH, PCB, and pesticide data were analyzed at a Contract Laboratory Program Laboratory and validated by the EPA Region 6 Environmental Services Branch ESAT data review team. All data is considered usable however, some results were qualified. Specific details of the data validation can be found in Attachment 5. Results are summarized in Attachment 4, which lists the frequency of detection, maximum chemical concentration detected in the sediment, the 95 percent upper confidence limit of the mean (95% UCLM) of the sample data set, and comparison criteria for each analyte detected. The 95% UCLM was calculated using EPA proUCL software; results for samples and their corresponding field duplicates were averaged.

To evaluate the potential ecological significance of chemical concentrations, maximum and 95% UCLM concentrations were compared to sediment quality comparison criteria for marine sediments. Marine sediment quality comparison criteria from (TCEQ 2006) were used for every chemical for which a value was available. If criteria were not available for a specific chemical from this source, National Oceanic and Atmospheric Administration Screening Quick Reference Tables were consulted (Buchman 2008) to determine other applicable marine criteria relating to no-effects or threshold of effects levels (MacDonald et al 1996, CCME 2002). Criteria were unavailable for several analytes as indicated in Attachment 5.

The maximum concentration of eight metals, Aroclor 1254, total PCBs, dichlorodiphenyldichloroethane (DDD), dichlorodiphenyltrichloroethane (DDT), and total DDT exceeded the screening criteria (Attachment 5). Comparison of maximum criteria to criteria may overestimate potential ecological impacts; therefore, the 95% UCLM was compared to criteria as a better indication of the site-wide potential for impacts. In some case, there were insufficient detections to derive confidence limits using proUCL; in these cases, the maximum concentration was used as a conservative estimate of the UCLM. The 95% UCLM exceeded the screening criteria for the following chemicals: arsenic, barium, copper, nickel, and DDT. It should be noted that selenium, which was identified in the ROD at a potential ecological risk, was not

detected in any of the offshore sediment samples collected.

Based on this information, there is potential for elevated concentrations of metals and DDT at the site in offshore sediment to cause ecological impact. However, this evaluation was limited to relatively conservative comparison criteria. Additional evaluation and assessment may be warranted.

COC Assessment

The State Marine of Port Arthur ROD (EPA 2007) did not identify any COCs since no further action was the selected remedy. The ROD did state that the HHRA had identified the following COCs that exceeded the allowable risk levels based on ingestion exposures in sediments (bio-accumulated by fish in Lake Sabine): Aroclor 1242, copper, and zinc. However, the TDH prepared a risk assessment of Sabine Lake under the EPA's Near Coastal Grant (TDH 1995). Although these data were gathered for a broader study, the data were reportedly collected in accordance with the EPA's Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories, Fish Sampling and Analysis (EPA 1993); analyses were performed in the TDH laboratory using EPA-approved methods for detection of metals, pesticides, PCBs, semivolatile, and volatile constituents. Aquatic species were collected to represent commonly consumed edible tissue taken by the public from sample locations in Sabine Lake (South), Sabine Lake (North), and Sabine Pass. Aroclor 1242 was not detected in the fish tissue samples. Copper was detected in 3 of 10 fish tissue samples tested. The maximum detected concentration was 19 milligrams per kilogram (mg/kg) in fish tissue, which was much lower than the modeled fish tissue concentration of 150 mg/kg used in the risk calculations. Zinc was detected in all 10 fish tissue samples. The maximum detected concentration of zinc in fish tissue was 344 mg/kg which was much lower than the modeled fish tissue concentration of 4,300 mg/kg used in the risk calculations. The much lower measured fish tissue concentrations were expected to better represent the current and future edible fish tissue concentrations that fishers may encounter in Lake Sabine. Therefore, no remedial action was warranted for sediment on the basis of human health impacts.

The ROD also stated that the Supplemental Remedial Investigation had identified selenium with sediment concentrations that exceeded the primary effects level (ERL) for benthic invertebrates. However, the ROD determined that selenium concentrations in site soils indicated that the site was not the source for elevated selenium concentrations in sediment samples. It was also determined in the ROD that although selenium concentrations were above screening levels, no remedial action was warranted for sediment on the basis of ecological impacts.

Each of the COCs identified in either the HHRA or Supplemental Remedial Investigation are discussed in the following sections:

Aroclor 1242

The uncertainty assessment in the ROD stated that Aroclor 1242 was only detected in one of seven sediment samples. The Aroclor 1242 concentration in this one sample was 0.084 mg/kg with an estimated qualifier. During the sediment sampling conducted for this five-year review, Aroclor 1242 was detected in four of 18 samples with a maximum concentration of 0.0460 mg/kg. The 95% UCLM was 0.038 mg/kg. This indicates that the concentration of Aroclor 1242 has not increased since the ROD was signed.

Neither the oral cancer slope factors (SF_o) nor the inhalation unit risk (IUR) for Aroclor 1242 have changed since the ROD [(2.0 mg/kg-day)⁻¹ and 5.7 x 10⁻⁴ (μg/m³)⁻¹], respectively). Aroclor did not have a reference dose oral (RFD_o) nor a reference concentration inhalation (RFC_i). This has not changed. Aroclor 1242 was not identified as an ecological COC in the ROD.

Copper

The uncertainty assessment in the ROD stated that copper was detected in 61 of 62 sediment samples. The maximum concentration was 313 mg/kg. Human health risk calculations were based on the 95% UCLM of 137 mg/kg. During the sediment sampling conducted for this five-year review, copper was detected in all 18 sediment samples with a maximum concentration of 294 mg/kg. The 95% UCLM is 97.9 mg/kg. This indicates that the concentration of copper has not increased since the ROD was signed.

The RFD_o for copper has increased from 3.7×10^{-2} mg/kg-day at the time of the ROD to 4.0×10^{-2} mg/kg-day. Copper did not have an IUR, SFO, nor a RFC_i at the time of the ROD. This has not changed. Copper was not identified as an ecological COC in the ROD.

Selenium

The summary of ecological risk in the ROD stated that selenium was identified as a risk to the benthic invertebrate community that may be living in the intertidal area along the banks of the site. During the Supplemental Remedial Investigation, selenium was detected in eight of eight sediment samples. The maximum concentration was 4.66 mg/kg. During the sediment sampling conducted for this five-year review, selenium was not detected (maximum reporting limit of 1.1 mg/kg) in any of the 18 samples collected (Attachment 5). This indicates that the concentration of selenium has not increased since the ROD was signed.

The primary ecological screening value of 1 mg/kg of selenium in marine sediment (National Oceanic and Atmospheric Administration 1999) has not changed since the ROD. Selenium was not identified as a human health COC in the ROD.

Zinc

The uncertainty assessment in the ROD stated that zinc was detected in 66 of 66 sediment samples. The maximum concentration was 3,910 mg/kg which was used for the human health risk calculations since the calculated 95% UCLM was higher. During the sediment sampling conducted for this five-year review, zinc was detected in all 18 sediment samples with a maximum concentration of 181 mg/kg. The 95% UCLM is 96.5 mg/kg. This indicates that the concentration of zinc has not increased since the ROD was signed.

The RFD_o for zinc has not changed since the ROD (3.0×10^{-1} mg/kg-day). Zinc did not have an IUR, SFO, nor a RFC_i at the time of the ROD. This has not changed. Zinc was not identified as an ecological COC in the ROD.

Other Data Reviewed

In early 2011, Tubal-Cain (current tenant) dredged offshore of the site. These dredging activities were conducted under the PBL Department of the Army Permit, which expired in 1984 (provided in Attachment 7). The dredge material removed from the Sabine Lake was placed upon both the SMPA and PBL sites (Figure 2 of Attachment 1). Three samples of dredge material placed on the SMPA site were collected January 6, 2011, and analyzed for total petroleum hydrocarbons (TPH), Resource Conservation and Recovery Act (RCRA) metals, and Toxicity Characterization Leaching Procedure (TCLP) metals. The analytical data report is included in Attachment 6. Tables 2 and 3 provide a summary of the analytical results of the tested dredge material.

TABLE 2
RCRA METALS/TPH ANALYTICAL RESULTS OF DREDGE MATERIAL

Analyte	Tubal-Cain Dredge Material Samples (Chemtex 2011)		
	#1 Soil (mg/kg)	#2 Soil (mg/kg)	#3 Soil (mg/kg)
Arsenic	4.0	3.7	3.2
Barium	65	65	65
Cadmium	<2.5	<2.5	<2.5
Chromium	11	7.6	9.6
Lead	64	37	78
Selenium	<2.5	<2.5	<2.5
Silver	<2.5	<2.5	<2.5
Mercury	<0.2	<0.2	<0.2
TPH C6-C12	<50	<50	<50
TPH>C12- C28	<50	96	<50
TPH>C28- C35	<50	<50	<50
TPH C6-C35	<50	121	<50
NOTE: mg/kg = milligram per kilogram TPH = Total petroleum hydrocarbons			

TABLE 3
TCLP ANALYTICAL RESULTS OF DREDGE MATERIAL

Analyte	Tubal-Cain Dredge Material Samples (Chemtex 2011)			Toxicity Characteristic Leaching Procedure Action Levels (mg/L)
	#1 Soil (mg/L)	#2 Soil (mg/L)	#3 Soil (mg/L)	
TCLP Arsenic	<0.05	<0.05	<0.05	5.0
TCLP Barium	<0.17	0.2	<0.17	100.0
TCLP Cadmium	<0.05	<0.05	<0.05	1.0
TCLP Chromium	<0.05	<0.05	<0.05	5.0
TCLP Lead	<0.05	<0.05	<0.05	5.0
TCLP Selenium	<0.06	<0.06	<0.06	1.0
TCLP Silver	<0.05	<0.05	<0.05	5.0
TCLP Mercury	<0.002	<0.002	<0.002	0.2
NOTE: mg/L = milligram per liter TCLP = Toxicity Characteristic Leaching Procedure				

6.5 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENT REVIEW

As part of this five-year review, ARARs were reviewed to determine if any newly promulgated or modified requirements of federal and state environmental laws have significantly changed the protectiveness of the remedies implemented.

No ARARs were identified in the ROD. No new laws or regulations have been promulgated or enacted that would call into question the effectiveness of the remedy at the site to protect human health and the environment. EPA will continue to monitor this site and any future changes in ARARs will be reported in the next five-year review.

6.6 SITE INSPECTION

A site inspection was conducted on November 10, 2011, to assess the condition of the site and the measures employed to protect human health and the environment. Attendees included: (1) Mr. Rafael Casanova (EPA); (2) Ms. Olga Salinas (TCEQ); (3) Mr. Derek Eades (TCEQ); (4) Mr. Rick Bailey (NBI); (5) Mr. Wes Penn (NBI); (6) Ms. April Ballweg (EA); and (7) Ms. Sheena Styger (EA). The site inspection checklist, including the inspection team roster, is provided as Attachment 8. The site inspection photographs are included in Attachment 9. Site survey forms (interview records) are provided in Attachment 10.

During the site visit, the inspection team made the following observations of new site conditions:

(1) Dredging has occurred offshore of the SMPA site, including the construction of a barge docking area. Dredge material was observed covering the southern portion of the site (Photograph No. 26 in Attachment 9; Figure 2 in Attachment 1). The dredge material was void of vegetative growth and had appeared to have been placed directly upon the ground surface of the SMPA site.

(2) Uncovered landfill debris was exposed at the surface of the site and along the shoreline of Lake Sabine (Photographs No. 17–25 in Attachment 8; Figure 2 in Attachment 1).

(3) Recent land clearing and construction of an industrial facility has occurred. The new facility includes an office building, maintenance shop, distillation column, and oil storage tanks.

The fence on the western edge of the site along Old Yacht Club Road appears to be in good condition; access through the gate is granted by electronic key code or authorization from the Tubal-Cain office. The fence separating the eastern edge of the SMPA and PBL sites, near the shoreline, has been partially removed. No fencing was observed along the southern side of the SMPA site, possibly due to excessive vegetation.

6.7 SITE INTERVIEWS

In accordance with the community involvement requirements of the five-year review process, key individuals to be surveyed were identified by EPA. Completed survey forms for the following individuals are included in Attachment 9:

- Mr. Rafael Casanova, EPA Remedial Project Manager
- Ms. Olga Salinas, TCEQ Project Manager
- Mr. David Durrett, NBI President/CEO
- Mr. Randy Cooper, Tubal-Cain Operations Manager

Previous Trustees for the site were contacted but did not return the survey forms.

Overall, the received responses were positive. Responding interviewees indicated they were not aware of any trespassing or vandalism, they did not know of any negative impacts on the community, and they all considered themselves well informed.

7.0 TECHNICAL ASSESSMENT

EPA Guidance indicates that to assess the protectiveness of a remedy, three questions (Questions A, B, and C) shall be answered.

7.1 QUESTION A: IS THE REMEDY FUNCTIONING AS INTENDED BY THE DECISION DOCUMENTS? YES.

- **RA performance**—Based on the review of documents, ARARs, sediment sampling data, and the results of the site inspection, the selected remedy for the SMPA site is functioning as intended by the ROD.
- **System operations/O&M**—Operation and maintenance activities include monitoring effectiveness of ICs to ensure land use remains industrial/commercial.
- **Costs of system operations/O&M**— The only costs identified during the five-year review period consist of filing fees associated with implementing IC (i.e., Restrictive Covenants). Individual charges of \$36.00 each were identified for File No. 2011010068 and File No. 2011010069, while a charge of \$32.00 was identified for File No. 2011010070.

- **Implementation of ICs and other measures**—Implementation of ICs at the site included three Restrictive Covenants which were filed and recorded with the Jefferson County Clerk's office in March 2011. Copies of the filed documents are included in Attachment 11
- **Monitoring activities**—Other than sediment sampling of Sabine Lake during each five-year review, there are no ongoing monitoring activities associated with the remedy.
- **Opportunities for optimization**—Opportunities for optimization have not been identified at this time.
- **Early indicators of potential remedy failure**—There are no indications of potential remedy failure.

7.2 QUESTION B: ARE THE ASSUMPTIONS USED AT THE TIME OF REMEDY SELECTION STILL VALID? NO.

- **Changes in standards, newly promulgated standards, and To Be Considered**—No new laws or regulations have been promulgated or enacted that would call into question the effectiveness of the remedy at the site to protect human health and the environment.
- **Changes in toxicity factors**—The toxicity factors for selenium have not changed since completion of the SLERA.
- **Changes in exposure pathways**—There have been changes in the physical site conditions such that the protectiveness may be affected. Dredge material has been placed directly on the ground surface on the southern portion of the site. This material covers an area of approximately 138,000 square feet (or 3.0 acres) and has a total estimated volume of 14,000 yd³. As identified in Section 6.4, limited analytical testing has been conducted. This dredge material is not part of the selected remedy and should not be considered in determining whether the implemented remedy selected in the ROD is protective. This material will be considered separately and a determination will be made concerning whether it presents a new risk to human health and/or ecological receptors.
- **Changes in land use**—There have been no changes in land use on or near the site that bear on the protectiveness of the selected remedy.
- **Expected Progress Towards Meeting RAOs**—Progress towards meeting the RAOs from the EPA 2011 Final Close Out Report is currently unknown. Further ecological assessment of offshore sediment data is needed. Also, further human health and ecological assessment of the dredge material is needed; however, this dredge material is not part of the selected remedy and should not be considered in determining whether the

implemented remedy selected in the ROD is protective. This material will be considered separately and a determination will be made concerning whether it presents a new risk to human health and/or ecological receptors.

7.3 QUESTION C: HAS ANY OTHER INFORMATION COME TO LIGHT THAT COULD CALL INTO QUESTION THE PROTECTIVENESS OF THE REMEDY? YES.

Offshore sediment sampling conducted in December 2011 reveals exceedances of ecological screening levels. Further evaluation of this data is necessary to determine if it is of concern.

7.4 TECHNICAL ASSESSMENT SUMMARY

According to the site inspection, the data reviewed, the offshore sediment samples collected in December 2011, and the site interviews, it is unknown if the remedy is functioning as intended by the ROD. New analytical data collected indicates exceedances of ecological screening criteria and changes in the physical site conditions have occurred such that the protectiveness of the remedy may be affected.

8.0 INSTITUTIONAL CONTROLS

ICs are generally defined as non-engineered instruments such as administrative and legal tools that do not involve construction or physically changing the site and that help minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use (EPA 2005). ICs can be used for many reasons including restriction of site use, modifying behavior, and providing information to individuals (EPA 2000). ICs may include easements, covenants, restrictions or other conditions on deeds, and/or groundwater and/or land use restriction documents (EPA 2001). The following sections describe the ICs implemented at the site, the potential effect of future land use plans on ICs, and any plans for changes to site contamination status.

8.1 TYPES OF INSTITUTIONAL CONTROLS IN PLACE AT THE SITE

Three Restrictive Covenants associated with the SMPA site were filed and recorded with the Jefferson County Clerk's office. These documents provide information concerning certain environmental conditions and use limitation pursuant to the TCEQ TRRP Rule found at 30 Texas Administrative Code Chapter 350 for the SMPA site property. Specifically:

Portions of the soils and groundwater of the Property contain certain identified chemicals of concern causing the Property to be considered an Affected Property as that term is defined in the TRRP...The Property currently meets TRRP standards for commercial/industrial use...No further remediation is required by the TCEQ as long as the Property is not to be used for residential purposes.

Copies of the filed documents are provided in Attachment 11.

8.2 EFFECT OF FUTURE LAND USE PLANS ON INSTITUTIONAL CONTROLS

The land is currently used as an industrial facility in accordance with the ICs in place at the site. No future land uses have been formally established for the site that would require an adjustment to the ICs currently being implemented. Furthermore, should future land use change, an assessment should be conducted with respect to whether additional ICs and/or access controls are needed to ensure that the site and the selected remedy remains protective of human health and the environment.

8.3 PLANS FOR CHANGES TO SITE CONTAMINATION STATUS

No changes to the status of the contamination at the site are anticipated.

9.0 ISSUES

Based on this first five-year review, it appears that the remedy at the SMPA site has been implemented as planned and is functioning in accordance with the requirements stated in the ROD (EPA 2007).

During this first five-year review, the following issues are noted:

TABLE 4
ISSUES IDENTIFIED

Issues	Affects Current Protectiveness (Yes/No)	Affects Future Protectiveness (Yes/No)
Sediment Sample Screening Criteria Exceedance —Elevated concentrations of metals and DDT observed in offshore sediment samples collected from Sabine Lake offshore of the site in December 2011 could have a potential to cause ecological impact.	Unknown at this time	Unknown at this time
Onsite Placement of Offshore Dredge Material —In 2011, the tenants leasing the property at the SMPA site dredged materials (e.g., sediment, shells, iron scraps) from offshore of the SMPA and PBL sites. Approximately 14,000 cubic yards of dredge material has been placed directly on the ground surface of the southern portion of the SMPA site. This material covers an area of 138,000 square feet (approximately 3.0 acres) of the SMPA site. This dredge material is not part of the selected remedy and should not be considered in determining whether the implemented remedy selected in the ROD is protective. This material will be considered separately and a determination will be made concerning whether it presents a new risk to human health and/or ecological receptors.	No (See Section 7.2)	No (See Section 7.2)

10.0 RECOMMENDATIONS AND FOLLOW-UP ACTIONS

Table 5 summarizes the recommendations and follow-up actions for the SMPA site.

TABLE 5
RECOMMENDATIONS AND FOLLOW-UP ACTIONS

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Yes/No)	
					Current	Future
Sediment Sample Screening Criteria Exceedance	The 95% upper confidence limit of the mean concentrations of arsenic, barium, copper, nickel, and DDT exceed ecological screening criteria. This data indicates that potential for ecological impact exists in the offshore sediments. Additional evaluation and assessment of the sediment data collected in December 2011 should be conducted to determine if site related material presents an unacceptable risk to ecological receptors.	PRP/Owner	TCEQ/EPA	September 2013	Unknown at this time.	Unknown at this time.
Onsite Placement of Offshore	Representative samples of the dredge material on	Owner	TCEQ/EPA	April 2013	No (See Section 7.2)	No (See Section 7.2)

Issue	Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Yes/No)	
					Current	Future
Dredge Material	the SMPA site should be collected and analyzed to determine if this surface material presents an unacceptable risk to human health and/or ecological receptors. This dredge material is not part of the selected remedy and should not be considered in determining whether the implemented remedy selected in the ROD is protective. This material will be considered separately and a determination will be made concerning whether it presents a new risk to human health and/or ecological receptors.					

11.0 PROTECTIVENESS STATEMENT

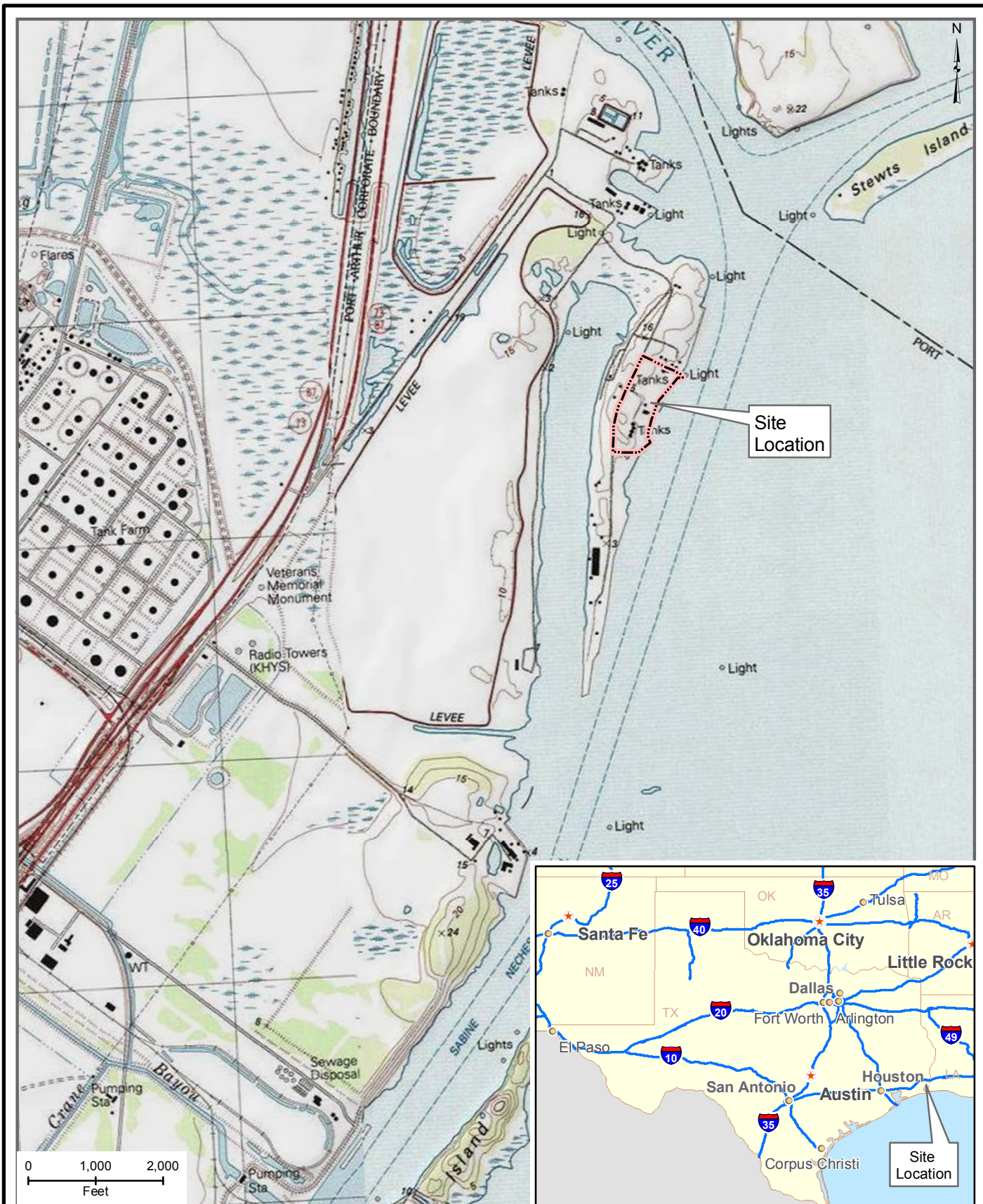
Based on the information available during the first five-year review, the selected remedy for the State Marine of Port Arthur Superfund Site appears to be performing as intended. The following actions will be taken to ensure that the remedy remains protective of human health and the environment: 1) further ecological assessment of the offshore sediment data collected during the five-year review according to the requirements of the 2007 ROD will be conducted. It is expected that these actions will take approximately one year to complete.

12.0 NEXT REVIEW

The SMPA site requires ongoing five-year reviews. The next, or second five-year review, shall be conducted no later than five years from the date of the Superfund Division Director's signature of this "First Five-Year Review Report."

ATTACHMENT 1

SITE LOCATION MAP, SITE LAYOUT MAP, AND SAMPLING LOCATION MAP



Source: ESRI ArcGIS Online and data partners including USGS and © 2007 National Geographic Society, 2009 Redlands, CA: Environmental Systems Research Institute

First Five-Year Review
State Marine of Port Arthur Superfund Site
Port Arthur, Jefferson County, Texas

Figure 1
Site Overview and
Location Map



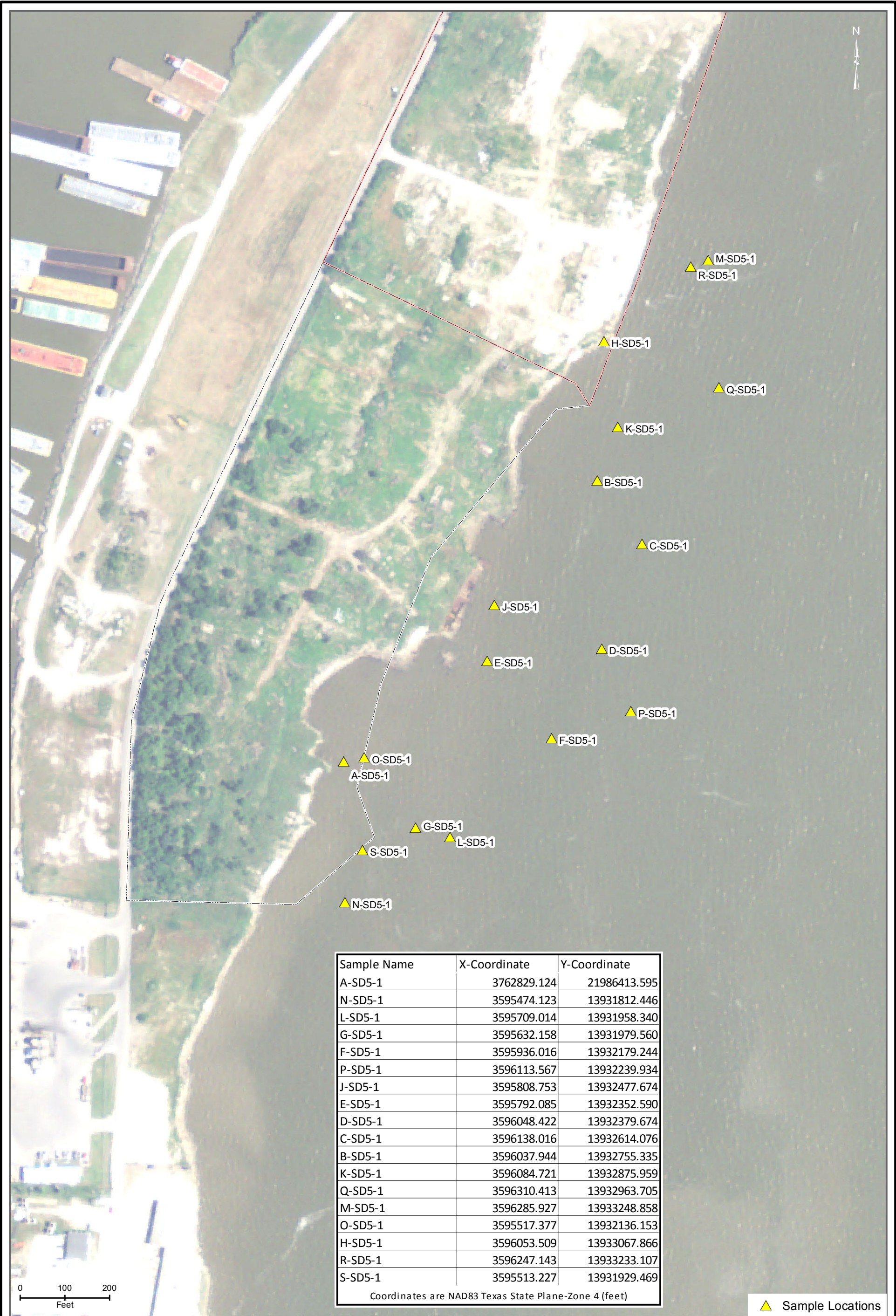


Figure 3
Locations Sampled
December 2011

ATTACHMENT 2

ANNOUNCEMENT OF THE FIRST FIVE-YEAR REVIEW



**STATE MARINE OF PORT ARTHUR SUPERFUND SITE
PUBLIC NOTICE
U.S. Environmental Protection Agency Region 6
First Five-Year Review of Site Remedy
October 2011**

The U.S. Environmental Protection Agency Region 6 (EPA) has begun the first Five-Year Review of the remedy for the State Marine of Port Arthur Superfund Site. The review will confirm if the remedy performed is still protecting human health and the environment. The site is located on Pleasure Islet, near Port Arthur, Texas. Once completed, the results of the Five-Year Review will be made available to the public on the internet at www.epa.gov and at the following information repository:

Port Arthur Public Library
4615 9th Avenue
Port Arthur, Texas 77642
(409) 985-8838
Monday-Friday (8:00 a.m. to 4:30 p.m.)

Information about the Site is also available on the internet at:

<http://www.epa.gov/region6/6sf/pdf/0602444.pdf>

For more information about the Site, contact:

Rafael A. Casanova, P.G.,
EPA Remedial Project Manager
(214) 665-7437
or 1-800-533-3508 (toll free)
or by e-mail at casanova.rafael@epa.gov

All media inquiries should be directed to the EPA Press Office at (214) 665-2200.

The Port Arthur News
A Division of Newspaper Holdings, Inc.
Port Arthur, Texas

AFFIDAVIT OF PUBLICATION

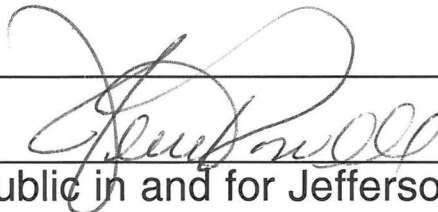
The State of Texas
County of Jefferson,
City of Port Arthur

Tara Ford, being duly sworn deposes and says:

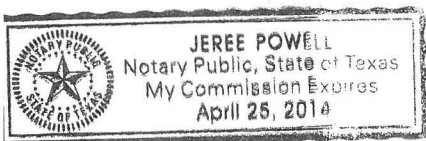
That she is a resident citizen of Jefferson County, Texas and that she is of lawful age; that she is the Classified Representative of the PORT ARTHUR NEWS, a division of Newspaper Holdings, Inc., same being a newspaper published and having a general circulation in the City of Port Arthur, Jefferson County, Texas; that said newspaper has been continuously and regularly published for a period of more than one year in Jefferson County, Texas, and that the advertising of **E.A. Engineering - State Marine of Port Arthur Ad# 09308P** was published in said newspaper in the issue of **October 9th, 2011** which were the regular publication days of said issues; and that said issues were actually published, circulated and distributed.



SUBSCRIBED AND sworn to before me,
this the 17th day of October, A.D. 2011



Notary Public in and for Jefferson County, Texas



Public Notices

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**STATE MARINE OF PORT ARTHUR SUPERFUND SITE
PUBLIC NOTICE
U.S. Environmental Protection Agency Region 6
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October 2011**

The U.S. Environmental Protection Agency Region 6 (EPA) has begun the first Five-Year Review of the remedy for the State Marine of Port Arthur Superfund Site. The review will confirm if the remedy performed is still protecting human health and the environment. The site is located on Pleasure Islet, near Port Arthur, Texas. Once completed, the results of the Five-Year Review will be made available to the public on the internet at www.epa.gov and at the following information repository:

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All media inquiries should be directed to the EPA Press Office at
(214) 665-2200.

**CITY OF PORT ARTHUR, TEXAS
ADVERTISEMENT FOR BIDS**

NOTICE IS HEREBY GIVEN THAT sealed Bids, addressed to the City of Port Arthur, will be received at the Office of the City Secretary, City Hall, 444- 4th Street or P.O. Box 1089, Port Arthur, Texas 77641 no later than 3:00 P.M., Wednesday, October 26, 2011 and all bids received will thereafter be opened and read aloud at 3:15 P.M., on Wednesday, October 26, 2011 in the City Council Chambers, 5th Floor, City Hall, Port Arthur, Texas for certain services briefly described as:

**Janitorial Services for Police, Fire
& Municipal Court**

Bids received after closing time will be returned unopened.

Copies of the Specifications and other Contract Documents are on file in the Purchasing Office, 444- 4th Street, City of Port Arthur, and are open for public inspection without charge. They can also be retrieved from the City's website.

www.portarthur.net

**MANDATORY PRE-BID MEETING IS
SCHEDULED FOR TUESDAY, OCTOBER
18, 2011 AT 10:00 A.M. AT THE POLICE
DEPARTMENT LOCATED AT 645 4TH ST.,
PORT ARTHUR, TEXAS**

The City of Port Arthur reserves the right to reject any and all bids and to waive informalities.

Per Article VI Sec. 2-262(C) of the City's Code of Ordinance, the City Council shall not award a contract to a company that is in arrears in its obligations to the City.

Shawna
Tubbs,
CPPB
Purchasing Manager

ATTACHMENT 3
DOCUMENTS REVIEWED

DOCUMENTS REVIEWED

- Buchman, M.F. 2008. NOAA Screening Quick Reference Tables, NOAA OR&R Report 08-1, Seattle WA, Office of Response and Restoration Division, National Oceanic and Atmospheric Administration, 34 pages.
- Canadian Council of Ministers of the Environment (CCME). 2002. Canadian Sediment Quality Guidelines for the Protection of Aquatic Life: Summary Tables. Update 2002. Accessed at http://www.ccme.ca/publications/ceqg_rcqe.html.
- CH2MHILL. 2005. Baseline Ecological Risk Assessment State Marine Superfund Site. EPA Work Assignment No. 139-RICO-06BX.
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ATTACHMENT 4
STATISTICAL ANALYSIS

**Comparison of December 2011 Maximum and 95% UCLM Sediment Concentrations to
Marine Benchmarks for State Marine Port of Arthur**

Chemical	Frequency of Detection	Maximum Chemical Concentration in the Sediment (mg/kg)	95% UCLM ^a (mg/kg)	TCEQ Marine Sediment Benchmarks ^b
<i>Metals</i>				
Aluminum	18/18	10600	6130	NA
Antimony	1/18	2.20	NA	NA
Arsenic	18/18	44.2	17.3	8.20
Barium	18/18	856	226	130.10 °
Beryllium	3/18	1.00	NA	NA
Calcium	18/18	38700	14630	NA
Chromium	18/18	103	38.1	81.0
Cobalt	18/18	21.1	7.69	NA
Copper	18/18	294	97.9	34.0
Iron	18/18	165000	59025	NA
Lead	18/18	53.0	24.8	46.7
Magnesium	18/18	5290	3327	NA
Manganese	18/18	2085	748	NA
Mercury	1/18	2.90	NA	0.150
Nickel	18/18	209	69.5	20.9
Potassium	18/18	3860	2403	NA
Sodium	18/18	12300	7732	NA
Vanadium	18/18	25.0	16.5	NA
Zinc	18/18	181	96.5	150
<i>PAHs</i>				
2-Methylnaphthalene	7/18	0.00440	0.00373	0.0700
Acenaphthene	4/18	0.0075	0.0064	0.0160
Acenaphthylene	10/18	0.0190	0.0109	0.0440
Anthracene	9/18	0.0210	0.0133	0.0853
Benzo(a)anthracene	14/18	0.0450	0.0210	0.261
Benzo(a)pyrene	15/18	0.0410	0.0207	0.430
Benzo(b)fluoranthene	15/18	0.0560	0.0250	NA
Benzo(g,h,i)perylene	17/18	0.0300	0.0147	NA
Benzo(k)fluoranthene	11/18	0.0272	0.0138	NA
Chrysene	15/18	0.0530	0.0246	0.384
Dibenzo(a,h)anthracene	8/18	0.00980	0.0071	0.0634
Fluoranthene	15/18	0.0893	0.0515	0.600
Fluorene	5/18	0.00520	0.0045	0.0190
Indeno(1,2,3-cd)pyrene	15/18	0.03200	0.01430	NA
Naphthalene	11/18	0.00450	0.00337	0.160
Phenanthrene	11/18	0.0330	0.0167	0.240
Pyrene	15/18	0.0783	0.0517	0.665
LMW PAHs	--	0.184	--	0.552
HMW PAHs	--	0.372	--	1.70
Total PAHs	--	0.556	--	4.02

**Comparison of December 2011 Maximum and 95% UCLM Sediment Concentrations to
Marine Benchmarks for State Marine Port of Arthur**

Chemical	Frequency of Detection	Maximum Chemical Concentration in the Sediment (mg/kg)	95% UCLM ^a (mg/kg)	TCEQ Marine Sediment Benchmarks ^b
PCBs				
Aroclor-1242	4/18	0.0460	0.0380	NA
Aroclor-1254	13/18	0.0750	0.0253	0.0633 ^d
Aroclor-1260	1/18	0.0170	NA	NA
Total PCBs	--	0.138	--	0.0227
Pesticides				
4,4'-DDD	1/18	0.00240	--	0.00122
4,4'-DDT	2/18	0.00380	0.00443	0.00119
Total DDT	--	0.00620	--	0.00158
Endrin ketone	1/18	0.00210	--	NA
SVOCs				
Bis(2-ethylhexyl)phthalate	8/18	0.160	0.107	0.182
Di-n-butylphthalate	6/18	0.0790	0.0744	NA
<p>NOTE:</p> <p>PAH = polynuclear aromatic hydrocarbons</p> <p>PCB = polychlorinated biphenols</p> <p>DDD = dichlorodiphenyldichloroethane</p> <p>DDT = dichlorodiphenyltrichloroethane</p> <p>mg/kg/ = milligrams per kilogram</p> <p>SVOC = semi-volatile organic compound</p> <p>^a 95% UCLM is the upper confidence level of the mean and is not available for those analytes for which there were too few detections to make the necessary calculations.</p> <p>^b The sediment benchmarks are primarily from TCEQ Guidance (2006).</p> <p>^c Sediment comparison criteria is the TEL from MacDonald et al. 1996 as reported in the NOAA Screening Quick Reference Tables (Buchman 2008).</p> <p>^d Sediment comparison criteria is derived from CCME (2002) as reported in the NOAA Screening Quick Reference Tables</p> <p><u>References:</u></p> <p>Buchman, M.F. 2008. NOAA Screening Quick Reference Tables, NOAA OR&R Report 08-1, Seattle WA, Office of Response and Restoration Division, National Oceanic and Atmospheric Administration, 34 pages.</p> <p>Canadian Council of Ministers of the Environment (CCME). 2002. Canadian Sediment Quality Guidelines for the Protection of Aquatic Life: Summary Tables. Update 2002. Accessed at http://www.ccme.ca/publications/ceqg_rcqe.html.</p> <p>MacDonald, D.D., R.S. Carr, F.D. Calder, E.R. Long, C.G. Ingersoll. 1996. Development and evaluation of sediment quality guidelines for Florida coastal waters. <i>Ecotoxicology</i> 5(4):253-278.</p> <p>Texas Commission on Environmental Quality (TCEQ). 2006. Update to Guidance for Conducting Ecological Risk Assessments at Remediation Sites In Texas RG-263 (Revised). Remediation Division. January. http://www.tceq.state.tx.us/assets/public/remediation/eco/0106eragupdate.pdf</p>				

ATTACHMENT 5

OFFSHORE SEDIMENT SAMPLING ANALYTICAL LAB REPORTS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099

February 9, 2012

MEMORANDUM

SUBJECT: Contract Laboratory Program Data Review

FROM: Raymond Flores, Alternate ESAT Regional Project Officer
Environmental Services Branch (6MD-H)

NGAMMON
FOR R. F.

TO: Rafael Casanova, Superfund Project Manager (6SF-RA)

Site: STATE MARINE OF PORT ARTHUR

Case#: 42040

SDG#: F4XP0

The EPA Region 6 Environmental Services Branch ESAT data review team has completed a review of the submitted Contract Laboratory Program (CLP) data package for the referenced site. The samples analyzed and reviewed are detailed in the attached Regional data review report.

The data package is acceptable for regional use. Problems, if any, are listed in the report narrative.

If you have any questions regarding the data review report, please contact me at (281) 983-2139.

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6
10625 Fallstone Road
Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE: February 8, 2012
TO: Marvelyn Humphrey, ESAT PO, Region 6 EPA
FROM: Ying-Ping Hsieh, Data Reviewer, ESAT *MPH*
THRU: Dominic G. Jarecki, ESAT Program Manager, ESAT *DGJ*
SUBJECT: CLP Data Review

Contract No.: EP-W-06-030
TO No.: 024
Task/Sub-Task: 2-11
ESAT Doc. No.: A024-211-0154
TDF No.: 6-12-103A
ESAT File No.: O-0770

Attached is the data review summary for Case # 42040
SDG # F4XP0
Site State Marine of Port Arthur

COMMENTS:

I. LEVEL OF DATA REVIEW

Region 6 Standard Review was performed for this data package.

II. CONTRACTUAL ASSESSMENT OF THE DATA PACKAGE

The CCS and hardcopy review found the data package contractually compliant.

III. TECHNICAL USABILITY ASSESSMENT OF THE DATA PACKAGE

The total number of sample results reviewed was 2,300 for this data package. Some results were qualified because of technical problems that were not considered significant.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
HOUSTON BRANCH
10625 FALLSTONE ROAD
HOUSTON, TEXAS 77099
ORGANIC REGIONAL DATA ASSESSMENT

CASE NO.	42040	SITE	State Marine of Port Arthur
LABORATORY	KAP	NO. OF SAMPLES	20
CONTRACT#	EP-W-11-031	MATRIX	Soil
SDG#	F4XP0	REVIEWER (IF NOT ESB)	ESAT
SOW#	SOM01.2/MA 2207.0	REVIEWER'S NAME	Ying-Ping Hsieh
SF#	303DD2BX	COMPLETION DATE	February 8, 2012

SAMPLE NO.	F4XP0	F4XP4	F4XP8	F4XQ2	F4XQ6
	F4XP1	F4XP5	F4XP9	F4XQ3	F4XQ7
	F4XP2	F4XP6	F4XQ0	F4XQ4	F4XQ8
	F4XP3	F4XP7	F4XQ1	F4XQ5	F4XQ9

DATA ASSESSMENT SUMMARY

	BNA	BNA SIM	PEST	ARO
1. HOLDING TIMES	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
2. GC/MS TUNE/INSTR. PERFORM.	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
3. CALIBRATIONS	<u>O</u>	<u>M</u>	<u>O</u>	<u>O</u>
4. BLANKS	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
5. DMC/SURROGATES	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
6. MATRIX SPIKE/DUPLICATE/LCS	<u>O</u>	<u>O</u>	<u>O</u>	<u>M</u>
7. OTHER QC	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
8. INTERNAL STANDARDS	<u>O</u>	<u>O</u>	<u>N/A</u>	<u>N/A</u>
9. COMPOUND ID/QUANTITATION	<u>O</u>	<u>O</u>	<u>O</u>	<u>M</u>
10. PERFORMANCE/COMPLETENESS	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
11. OVERALL ASSESSMENT	<u>O</u>	<u>M</u>	<u>O</u>	<u>M</u>

O = Data had no problems.

M = Data qualified because of major or minor problems.

Z = Data unacceptable.

NA = Not applicable.

ACTION ITEMS:

AREA OF CONCERN: **BNA-SIM** Pentachlorophenol failed the technical %D calibration criteria. **ARO** Aroclor-1254 had poor MS/MSD performance. Aroclor-1242 and/or Aroclor-1254 had inconsistent two-column quantitation results for eight samples.

**COMMENTS/CLARIFICATIONS
REGION 6 CLP QA REVIEW**

CASE 42040 **SDG** F4XP0 **SITE** State Marine of Port Arthur **LAB** KAP

COMMENTS: This SDG consisted of 20 soil samples for BNA, BNA-SIM, PEST, and ARO analyses following CLP SOW SOM01.2. The samples were also subject to Modified Analysis Request 2207.0 (MA), which requested lower QLs for Aroclor-1221, Aroclor-1242, and Aroclor-1254; and an LCS spiked with Aroclor-1242 at 2X the MA CRQL. The COC Records designated sample F4XP2 for laboratory QC analyses.

The SOW requires that the soil sample results be adjusted for moisture content, which raised the adjusted QLs above the CRQLs specified in the SOW. The adjusted CRQLs were reported by the laboratory and are referred to as SQLs (Sample Quantitation Limits) in this report.

Although both the full scan and SIM analysis results were available for each BNA sample, the SIM results were designated for use only for pentachlorophenol. The laboratory lowered the QLs for BNA, BNA-SIM, and ARO samples by increased sample size. The laboratory also lowered the low point standard concentration for Aroclor-1221, Aroclor-1242, and Aroclor-1254 to achieve the MA requirements. The MA-requested MDL data for Aroclor-1221, Aroclor-1242, and Aroclor-1254 were acceptable.

Standard Review was performed for this data package as requested by the TDF. The target compounds of concern with the action levels in parentheses are pentachlorophenol (6.7 ug/Kg), 3,3'-dichlorobenzidine (170 ug/Kg), and Aroclor-1242 (33 ug/Kg). The only target compound of concern detected at concentrations above the action level was Aroclor-1242 in samples F4XQ4 and F4XQ7.

Some results were qualified for 10 BNA-SIM and 8 ARO samples because of problems with calibration, MS/MSD performance, and/or compound quantitation. The technical usability of the reported results is indicated by ESAT's final data qualifiers in the Data Summary Table. An Evidence Audit was conducted for the Complete Sample Delivery Group File, and the audit results were reported on the Evidence Inventory Checklist.

NOTE: THE FOLLOWING REVIEW NARRATIVE ADDRESSES BOTH CONTRACTUAL ISSUES (BASED ON THE STATEMENT OF WORK) AND TECHNICAL ISSUES (BASED ON THE NATIONAL FUNCTIONAL GUIDELINES). THE ASSESSMENT MADE FOR EACH QC PARAMETER IS SOLELY BASED ON THE TECHNICAL DATA USABILITY, WHICH MAY NOT NECESSARILY BE AFFECTED BY CONTRACTUAL PROBLEMS. THE ASSESSMENTS ARE DEFINED BELOW.

Acceptable = No results were qualified for any problem associated with this QC parameter.
Provisional = Some results were qualified because of problems associated with this QC parameter.
Unusable = All results are unusable because of major problems associated with this QC parameter.

**ORGANIC QA REVIEW
CONTINUATION PAGE**

CASE 42040 **SDG** F4XP0 **SITE** State Marine of Port Arthur **LAB** KAP

1. **Holding Times:** Acceptable. All samples were extracted and analyzed within the contractual and technical holding time limits.
2. **Tuning/Performance:** Acceptable. The DFTPP analyses met GC/MS tuning criteria. Instrument performance met the QC guidelines for the GC analyses.
3. **Calibrations:** Provisional. With the exceptions discussed below, the target compounds met contractual and technical calibration criteria.

BNA Pentachlorophenol failed the technical %RSD criteria for the IC. Data qualification was unnecessary because the results for this compound were not designated for use.

BNA-SIM Pentachlorophenol and indeno(1,2,3-cd)pyrene failed the technical %D criteria for some opening CCVs. The reviewer qualified as estimated the pentachlorophenol results for associated samples F4XP0, F4XP1, F4XP2, F4XP3, F4XP4, F4XP5, F4XP6, F4XP7, F4XP8, and F4XQ5. Data qualification was unnecessary for indeno(1,2,3-cd)pyrene because the results for this compound were not designated for use. Pentachlorophenol also failed the technical minimum RRF criteria for the IC and opening CCVs. Since the raw calibration data demonstrated the instrument sensitivity at the CRQL, data qualification was unnecessary in the reviewer's opinion.

4. **Blanks:** Acceptable. The method, storage, and instrument blanks met contractual requirements and were free of target compound contaminants.

5. **Deuterated Monitoring Compounds (DMC's)/Surrogates:** Acceptable. The surrogate recoveries were within QC limits for PEST and ARO samples. All BNA and BNA-SIM samples had contractually acceptable DMC performance although four BNA samples had up to two DMC recoveries above the QC limits. No action was taken for these high DMC recoveries because the associated analytes were not detected in the samples.

6. **Matrix Spike/Matrix Spike Duplicate/Laboratory Control Sample (MS/MSD/LCS):** Provisional. An LCS spiked with Aroclor-1242 at 2X the MA CRQL was requested for the ARO fraction. The LCS recoveries were within QC limits for the PEST and ARO fractions. Aroclor-1254 was spiked instead of Aroclor-1016 and Aroclor-1260 for the ARO MS/MSD analyses as requested by the MA. MS/MSD results were within the QC limits except for those discussed below.

BNA The MS and MSD recoveries exceeded the QC limits for phenol, 4-chloro-3-methylphenol, 4-nitrophenol, and pentachlorophenol. Since these compounds were undetected or not designated for use in the unspiked sample, data qualification was not required.

**ORGANIC QA REVIEW
CONTINUATION PAGE**

CASE 42040 **SDG** F4XP0 **SITE** State Marine of Port Arthur **LAB** KAP

BNA-SIM The MS and MSD recoveries exceeded the QC limit for pentachlorophenol. Since this compound was not detected in the unspiked sample, data qualification was not required.

ARO The MS/MSD recoveries for Aroclor-1254 were below the QC limit. Therefore, the reviewer qualified as estimated the Aroclor-1254 result for unspiked sample F4XP2.

7. Other QC: Not Applicable.

8. Internal Standards (IS): Acceptable. The BNA and BNA-SIM samples had acceptable IS performance.

9. Compound Identity (ID)/Quantitation: Provisional. Target analytes present at concentrations above the SQLs are bis(2-ethylhexyl)phthalate in two BNA samples and Aroclor-1242 and/or Aroclor-1254 in twelve ARO samples. GC/MS confirmation was not required for the reported PEST (all below the SQLs) and ARO results.

The reviewer qualified the following results >SQLs as estimated because the two-column concentrations differed by more than 25%, indicating possible matrix interference: Aroclor-1242 in samples F4XQ2, F4XQ3, F4XQ7, and F4XQ9 and Aroclor-1254 in samples F4XP2, F4XQ1, F4XQ3, F4XQ5, F4XQ8, and F4XQ9. No other compound ID or quantitation problem was detected.

10. Performance/Completeness: Acceptable. The data package was complete. The DST included in this report is the final version.

11. Overall Assessment: Results designated for use are acceptable for all BNA, 10 BNA-SIM, all PEST, and 12 ARO samples.

BNA-SIM The pentachlorophenol results were qualified for samples F4XP0, F4XP1, F4XP2, F4XP3, F4XP4, F4XP5, F4XP6, F4XP7, F4XP8, and F4XQ5 because of a calibration problem.

ARO Some results were qualified for samples F4XP2, F4XQ1, F4XQ2, F4XQ3, F4XQ5, F4XQ7, F4XQ8, and F4XQ9 because of problems with MS/MSD performance and/or compound quantitation.

ORGANIC ACRONYMS

%D	Percent Difference
%RSD	Percent Relative Standard Deviation
ARO	Aroclors
BFB	4-Bromofluorobenzene
BNA	Base/Neutral and Acid
CADRE	Computer-Aided Data Review and Evaluation
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
DCB	Decachlorobiphenyl
DETPP	Decafluorotriphenylphosphine
DMC	Deuterated Monitoring Compound
DST	Data Summary Table
GC/ECD	Gas Chromatograph/Electron Capture Detector
GC/MS	Gas Chromatograph/Mass Spectrometer
GPC	Gel Permeation Chromatography
IC	Initial Calibration
INDA (B, C)	Individual Standard Mixture A(or B or C)
IS	Internal Standard
LCS	Laboratory Control Sample
LMVOA	Low/Medium Volatile Organic Analysis
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NFG	National Functional Guidelines
OTR/COC	Organic Traffic Report/Chain of Custody
PAH	Polynuclear Aromatic Hydrocarbon
PE	Performance Evaluation
PEM	Performance Evaluation Mixture
PEST	Pesticides
QA	Quality Assurance
QC	Quality Control
QL	Quantitation Limit
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RRT	Relative Retention Time
RSCC	Regional Sample Control Center
RT	Retention Time
SDG	Sample Delivery Group
SDMC	Semivolatile Deuterated Monitoring Compound
SIM	Selected Ion Monitoring
SMO	Sample Management Office
SOW	Statement of Work
SQL	Sample Quantitation Limit
SVOA	Semivolatile Organic Analysis
TCL	Target Compound List
TCX	Tetrachloro-m-xylene
TIC	Tentatively Identified Compound
TVOA	Trace Volatile Organic Analysis
VDMC	Volatile Deuterated Monitoring Compound
VOA	Volatile Organic Analysis

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U** Not detected at reported quantitation limit.
- N** Identification is tentative.
- J** Estimated value.
- L** Reported concentration is below the CRQL.
- M** Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
- R** Unusable.
- ^** High biased. Actual concentration may be lower than the concentration reported.
- ✓** Low biased. Actual concentration may be higher than the concentration reported.
- F+** A false positive exists.
- F-** A false negative exists.
- UJ** Estimated quantitation limit.
- T** Identification is questionable because of absence of other commonly coexisting pesticides.
- C** Identification of pesticide or aroclor has been confirmed by Gas Chromatography/Mass Spectrometer (GC/MS).
- X** Identification of pesticide or aroclor could not be confirmed by GC/MS when attempted.
- *** Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP0	
STATION LOCATION		N-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	130	130	U
Phenol	130	130	U
Bis(2-chloroethyl)ether	130	130	U
2-Chlorophenol	130	130	U
2-Methylphenol	130	130	U
2,2'-Oxybis(1-chloropropane)	130	130	U
Acetophenone	130	130	U
4-Methylphenol	130	130	U
N-Nitroso-di-n-propylamine	130	130	U
Hexachloroethane	130	130	U
Nitrobenzene	130	130	U
Isophorone	130	130	U
2-Nitrophenol	130	130	U
2,4-Dimethylphenol	130	130	U
Bis(2-chloroethoxy)methane	130	130	U
2,4-Dichlorophenol	130	130	U
Naphthalene	130	130	U
4-Chloroaniline	130	130	U
Hexachlorobutadiene	130	130	U
Caprolactam	130	130	U
4-Chloro-3-methylphenol	130	130	U
2-Methylnaphthalene	130	130	U
Hexachlorocyclopentadiene	130	130	U
2,4,6-Trichlorophenol	130	130	U
2,4,5-Trichlorophenol	130	130	U
1,1'-Biphenyl	130	130	U
2-Chloronaphthalene	130	130	U
2-Nitroaniline	250	250	U
Dimethylphthalate	130	130	U
2,6-Dinitrotoluene	130	130	U
Acenaphthylene	130	130	U
3-Nitroaniline	250	250	U
Acenaphthene	130	130	U
2,4-Dinitrophenol	250	250	U
4-Nitrophenol	250	250	U
Dibenzofuran	130	130	U
2,4-Dinitrotoluene	130	130	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP0	
STATION LOCATION		N-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	130	130	U
Fluorene	130	130	U
4-Chlorophenyl-phenylether	130	130	U
4-Nitroaniline	250	250	U
4,6-Dinitro-2-methylphenol	250	250	U
N-Nitrosodiphenylamine	130	130	U
1,2,4,5-Tetrachlorobenzene	130	130	U
4-Bromophenyl-phenylether	130	130	U
Hexachlorobenzene	130	130	U
Atrazine	130	130	U
Pentachlorophenol	250	250	U *
Phenanthrene	130	130	U
Anthracene	130	130	U
Carbazole	130	130	U
Di-n-butylphthalate	130	130	U
Fluoranthene	130	130	U
Pyrene	130	130	U
Butylbenzylphthalate	130	130	U
3,3'-Dichlorobenzidine	130	130	U
Benzo(a)anthracene	130	130	U
Chrysene	130	130	U
Bis(2-ethylhexyl)phthalate	130	140	
Di-n-octylphthalate	130	130	U
Benzo(b)fluoranthene	130	51	LJ
Benzo(k)fluoranthene	130	51	LJ
Benzo(a)pyrene	130	51	LJ
Indeno(1,2,3-cd)pyrene	130	130	U
Dibenzo(a,h)anthracene	130	130	U
Benzo(g,h,i)perylene	130	130	U
2,3,4,6-Tetrachlorophenol	130	130	U

Weight (g) : 60.4

%Moisture : 34

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP0(SIM)	
STATION LOCATION		N-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.5	2.6	*
2-Methylnaphthalene	2.5	2.3	*
Acenaphthylene	2.5	3.0	*
Acenaphthene	2.5	2.5	U *
Fluorene	2.5	2.5	U *
Pentachlorophenol	5.0	5.0	UJ
Phenanthrene	2.5	4.0	*
Anthracene	2.5	2.5	U *
Fluoranthene	2.5	20	*
Pyrene	2.5	16	*
Benzo(a)anthracene	2.5	6.1	*
Chrysene	2.5	11	*
Benzo(b)fluoranthene	2.5	8.5	*
Benzo(k)fluoranthene	2.5	3.4	*
Benzo(a)pyrene	2.5	6.5	*
Indeno(1,2,3-cd)pyrene	2.5	4.6	*
Dibenzo(a,h)anthracene	2.5	2.5	U *
Benzo(g,h,i)perylene	2.5	6.8	*

Weight (g) : 60.4

%Moisture : 34

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP1	
STATION LOCATION		L-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	140	140	U
Phenol	140	140	U
Bis(2-chloroethyl)ether	140	140	U
2-Chlorophenol	140	140	U
2-Methylphenol	140	140	U
2,2'-Oxybis(1-chloropropane)	140	140	U
Acetophenone	140	140	U
4-Methylphenol	140	140	U
N-Nitroso-di-n-propylamine	140	140	U
Hexachloroethane	140	140	U
Nitrobenzene	140	140	U
Isophorone	140	140	U
2-Nitrophenol	140	140	U
2,4-Dimethylphenol	140	140	U
Bis(2-chloroethoxy)methane	140	140	U
2,4-Dichlorophenol	140	140	U
Naphthalene	140	140	U
4-Chloroaniline	140	140	U
Hexachlorobutadiene	140	140	U
Caprolactam	140	140	U
4-Chloro-3-methylphenol	140	140	U
2-Methylnaphthalene	140	140	U
Hexachlorocyclopentadiene	140	140	U
2,4,6-Trichlorophenol	140	140	U
2,4,5-Trichlorophenol	140	140	U
1,1'-Biphenyl	140	140	U
2-Chloronaphthalene	140	140	U
2-Nitroaniline	260	260	U
Dimethylphthalate	140	140	U
2,6-Dinitrotoluene	140	140	U
Acenaphthylene	140	140	U
3-Nitroaniline	260	260	U
Acenaphthene	140	140	U
2,4-Dinitrophenol	260	260	U
4-Nitrophenol	260	260	U
Dibenzofuran	140	140	U
2,4-Dinitrotoluene	140	140	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP1	
STATION LOCATION		L-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	140	140	U
Fluorene	140	140	U
4-Chlorophenyl-phenylether	140	140	U
4-Nitroaniline	260	260	U
4,6-Dinitro-2-methylphenol	260	260	U
N-Nitrosodiphenylamine	140	140	U
1,2,4,5-Tetrachlorobenzene	140	140	U
4-Bromophenyl-phenylether	140	140	U
Hexachlorobenzene	140	140	U
Atrazine	140	140	U
Pentachlorophenol	260	260	U *
Phenanthrene	140	140	U
Anthracene	140	140	U
Carbazole	140	140	U
Di-n-butylphthalate	140	140	U
Fluoranthene	140	140	U
Pyrene	140	140	U
Butylbenzylphthalate	140	140	U
3,3'-Dichlorobenzidine	140	140	U
Benzo(a)anthracene	140	140	U
Chrysene	140	140	U
Bis(2-ethylhexyl)phthalate	140	140	U
Di-n-octylphthalate	140	140	U
Benzo(b)fluoranthene	140	140	U
Benzo(k)fluoranthene	140	140	U
Benzo(a)pyrene	140	140	U
Indeno(1,2,3-cd)pyrene	140	140	U
Dibenzo(a,h)anthracene	140	140	U
Benzo(g,h,i)perylene	140	140	U
2,3,4,6-Tetrachlorophenol	140	140	U

Weight (g) : 60.8

%Moisture : 38

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP1(SIM)	
STATION LOCATION		L-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.6	2.6	U *
2-Methylnaphthalene	2.6	2.6	U *
Acenaphthylene	2.6	2.6	U *
Acenaphthene	2.6	2.6	U *
Fluorene	2.6	2.6	U *
Pentachlorophenol	5.3	5.3	UJ
Phenanthrene	2.6	2.6	U *
Anthracene	2.6	2.6	U *
Fluoranthene	2.6	3.6	*
Pyrene	2.6	6.7	*
Benzo(a)anthracene	2.6	2.5	*
Chrysene	2.6	3.3	*
Benzo(b)fluoranthene	2.6	4.5	*
Benzo(k)fluoranthene	2.6	2.6	U *
Benzo(a)pyrene	2.6	4.0	*
Indeno(1,2,3-cd)pyrene	2.6	3.5	*
Dibenzo(a,h)anthracene	2.6	2.6	U *
Benzo(g,h,i)perylene	2.6	5.7	*

Weight (g) : 60.8
%Moisture : 38
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP2	
STATION LOCATION		G-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	140	140	U
Phenol	140	140	U
Bis(2-chloroethyl)ether	140	140	U
2-Chlorophenol	140	140	U
2-Methylphenol	140	140	U
2,2'-Oxybis(1-chloropropane)	140	140	U
Acetophenone	140	140	U
4-Methylphenol	140	140	U
N-Nitroso-di-n-propylamine	140	140	U
Hexachloroethane	140	140	U
Nitrobenzene	140	140	U
Isophorone	140	140	U
2-Nitrophenol	140	140	U
2,4-Dimethylphenol	140	140	U
Bis(2-chloroethoxy)methane	140	140	U
2,4-Dichlorophenol	140	140	U
Naphthalene	140	140	U
4-Chloroaniline	140	140	U
Hexachlorobutadiene	140	140	U
Caprolactam	140	140	U
4-Chloro-3-methylphenol	140	140	U
2-Methylnaphthalene	140	140	U
Hexachlorocyclopentadiene	140	140	U
2,4,6-Trichlorophenol	140	140	U
2,4,5-Trichlorophenol	140	140	U
1,1'-Biphenyl	140	140	U
2-Chloronaphthalene	140	140	U
2-Nitroaniline	270	270	U
Dimethylphthalate	140	140	U
2,6-Dinitrotoluene	140	140	U
Acenaphthylene	140	140	U
3-Nitroaniline	270	270	U
Acenaphthene	140	140	U
2,4-Dinitrophenol	270	270	U
4-Nitrophenol	270	270	U
Dibenzofuran	140	140	U
2,4-Dinitrotoluene	140	140	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP2	
STATION LOCATION		G-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	140	140	U
Fluorene	140	140	U
4-Chlorophenyl-phenylether	140	140	U
4-Nitroaniline	270	270	U
4,6-Dinitro-2-methylphenol	270	270	U
N-Nitrosodiphenylamine	140	140	U
1,2,4,5-Tetrachlorobenzene	140	140	U
4-Bromophenyl-phenylether	140	140	U
Hexachlorobenzene	140	140	U
Atrazine	140	140	U
Pentachlorophenol	270	270	U *
Phenanthrene	140	140	U
Anthracene	140	140	U
Carbazole	140	140	U
Di-n-butylphthalate	140	140	U
Fluoranthene	140	140	U
Pyrene	140	140	U
Butylbenzylphthalate	140	140	U
3,3'-Dichlorobenzidine	140	140	U
Benzo(a)anthracene	140	140	U
Chrysene	140	140	U
Bis(2-ethylhexyl)phthalate	140	160	
Di-n-octylphthalate	140	140	U
Benzo(b)fluoranthene	140	140	U
Benzo(k)fluoranthene	140	140	U
Benzo(a)pyrene	140	140	U
Indeno(1,2,3-cd)pyrene	140	140	U
Dibenzo(a,h)anthracene	140	140	U
Benzo(g,h,i)perylene	140	140	U
2,3,4,6-Tetrachlorophenol	140	140	U

Weight (g) : 60.6

%Moisture : 39

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP2(SIM)	
STATION LOCATION		G-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.7	3.0	*
2-Methylnaphthalene	2.7	3.0	*
Acenaphthylene	2.7	7.7	*
Acenaphthene	2.7	2.7	U *
Fluorene	2.7	2.7	U *
Pentachlorophenol	5.4	5.4	UJ
Phenanthrene	2.7	7.0	*
Anthracene	2.7	7.3	*
Fluoranthene	2.7	15	*
Pyrene	2.7	16	*
Benzo(a)anthracene	2.7	10	*
Chrysene	2.7	15	*
Benzo(b)fluoranthene	2.7	16	*
Benzo(k)fluoranthene	2.7	5.3	*
Benzo(a)pyrene	2.7	15	*
Indeno(1,2,3-cd)pyrene	2.7	11	*
Dibenzo(a,h)anthracene	2.7	3.9	*
Benzo(g,h,i)perylene	2.7	14	*

Weight (g) : 60.6

%Moisture : 39

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP3	
STATION LOCATION		F-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	140	140	U
Phenol	140	140	U
Bis(2-chloroethyl)ether	140	140	U
2-Chlorophenol	140	140	U
2-Methylphenol	140	140	U
2,2'-Oxybis(1-chloropropane)	140	140	U
Acetophenone	140	140	U
4-Methylphenol	140	140	U
N-Nitroso-di-n-propylamine	140	140	U
Hexachloroethane	140	140	U
Nitrobenzene	140	140	U
Isophorone	140	140	U
2-Nitrophenol	140	140	U
2,4-Dimethylphenol	140	140	U
Bis(2-chloroethoxy)methane	140	140	U
2,4-Dichlorophenol	140	140	U
Naphthalene	140	140	U
4-Chloroaniline	140	140	U
Hexachlorobutadiene	140	140	U
Caprolactam	140	140	U
4-Chloro-3-methylphenol	140	140	U
2-Methylnaphthalene	140	140	U
Hexachlorocyclopentadiene	140	140	U
2,4,6-Trichlorophenol	140	140	U
2,4,5-Trichlorophenol	140	140	U
1,1'-Biphenyl	140	140	U
2-Chloronaphthalene	140	140	U
2-Nitroaniline	270	270	U
Dimethylphthalate	140	140	U
2,6-Dinitrotoluene	140	140	U
Acenaphthylene	140	140	U
3-Nitroaniline	270	270	U
Acenaphthene	140	140	U
2,4-Dinitrophenol	270	270	U
4-Nitrophenol	270	270	U
Dibenzofuran	140	140	U
2,4-Dinitrotoluene	140	140	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP3	
STATION LOCATION		F-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	140	140	U
Fluorene	140	140	U
4-Chlorophenyl-phenylether	140	140	U
4-Nitroaniline	270	270	U
4,6-Dinitro-2-methylphenol	270	270	U
N-Nitrosodiphenylamine	140	140	U
1,2,4,5-Tetrachlorobenzene	140	140	U
4-Bromophenyl-phenylether	140	140	U
Hexachlorobenzene	140	140	U
Atrazine	140	140	U
Pentachlorophenol	270	270	U *
Phenanthrene	140	140	U
Anthracene	140	140	U
Carbazole	140	140	U
Di-n-butylphthalate	140	140	U
Fluoranthene	140	140	U
Pyrene	140	140	U
Butylbenzylphthalate	140	140	U
3,3'-Dichlorobenzidine	140	140	U
Benzo(a)anthracene	140	140	U
Chrysene	140	140	U
Bis(2-ethylhexyl)phthalate	140	140	U
Di-n-octylphthalate	140	140	U
Benzo(b)fluoranthene	140	140	U
Benzo(k)fluoranthene	140	140	U
Benzo(a)pyrene	140	140	U
Indeno(1,2,3-cd)pyrene	140	140	U
Dibenzo(a,h)anthracene	140	140	U
Benzo(g,h,i)perylene	140	140	U
2,3,4,6-Tetrachlorophenol	140	140	U

Weight (g) : 60.8

%Moisture : 40

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP3(SIM)	
STATION LOCATION		F-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.7	2.7	U *
2-Methylnaphthalene	2.7	2.7	U *
Acenaphthylene	2.7	2.7	U *
Acenaphthene	2.7	2.7	U *
Fluorene	2.7	2.7	U *
Pentachlorophenol	5.5	5.5	UJ
Phenanthrene	2.7	2.7	U *
Anthracene	2.7	2.7	U *
Fluoranthene	2.7	2.7	U *
Pyrene	2.7	2.7	U *
Benzo(a)anthracene	2.7	2.7	U *
Chrysene	2.7	2.7	U *
Benzo(b)fluoranthene	2.7	2.7	U *
Benzo(k)fluoranthene	2.7	2.7	U *
Benzo(a)pyrene	2.7	2.7	U *
Indeno(1,2,3-cd)pyrene	2.7	2.7	U *
Dibenzo(a,h)anthracene	2.7	2.7	U *
Benzo(g,h,i)perylene	2.7	2.9	*

Weight (g) : 60.8

%Moisture : 40

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP4	
STATION LOCATION		F-SD5-1 D	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	130	130	U
Phenol	130	130	U
Bis(2-chloroethyl)ether	130	130	U
2-Chlorophenol	130	130	U
2-Methylphenol	130	130	U
2,2'-Oxybis(1-chloropropane)	130	130	U
Acetophenone	130	130	U
4-Methylphenol	130	130	U
N-Nitroso-di-n-propylamine	130	130	U
Hexachloroethane	130	130	U
Nitrobenzene	130	130	U
Isophorone	130	130	U
2-Nitrophenol	130	130	U
2,4-Dimethylphenol	130	130	U
Bis(2-chloroethoxy)methane	130	130	U
2,4-Dichlorophenol	130	130	U
Naphthalene	130	130	U
4-Chloroaniline	130	130	U
Hexachlorobutadiene	130	130	U
Caprolactam	130	130	U
4-Chloro-3-methylphenol	130	130	U
2-Methylnaphthalene	130	130	U
Hexachlorocyclopentadiene	130	130	U
2,4,6-Trichlorophenol	130	130	U
2,4,5-Trichlorophenol	130	130	U
1,1'-Biphenyl	130	130	U
2-Chloronaphthalene	130	130	U
2-Nitroaniline	260	260	U
Dimethylphthalate	130	130	U
2,6-Dinitrotoluene	130	130	U
Acenaphthylene	130	130	U
3-Nitroaniline	260	260	U
Acenaphthene	130	130	U
2,4-Dinitrophenol	260	260	U
4-Nitrophenol	260	260	U
Dibenzofuran	130	130	U
2,4-Dinitrotoluene	130	130	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP4	
STATION LOCATION		F-SD5-1 D	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	130	130	U
Fluorene	130	130	U
4-Chlorophenyl-phenylether	130	130	U
4-Nitroaniline	260	260	U
4,6-Dinitro-2-methylphenol	260	260	U
N-Nitrosodiphenylamine	130	130	U
1,2,4,5-Tetrachlorobenzene	130	130	U
4-Bromophenyl-phenylether	130	130	U
Hexachlorobenzene	130	130	U
Atrazine	130	130	U
Pentachlorophenol	260	260	U *
Phenanthrene	130	130	U
Anthracene	130	130	U
Carbazole	130	130	U
Di-n-butylphthalate	130	130	U
Fluoranthene	130	130	U
Pyrene	130	130	U
Butylbenzylphthalate	130	130	U
3,3'-Dichlorobenzidine	130	130	U
Benzo(a)anthracene	130	130	U
Chrysene	130	130	U
Bis(2-ethylhexyl)phthalate	130	130	U
Di-n-octylphthalate	130	130	U
Benzo(b)fluoranthene	130	130	U
Benzo(k)fluoranthene	130	130	U
Benzo(a)pyrene	130	130	U
Indeno(1,2,3-cd)pyrene	130	130	U
Dibenzo(a,h)anthracene	130	130	U
Benzo(g,h,i)perylene	130	130	U
2,3,4,6-Tetrachlorophenol	130	130	U

Weight (g) : 60.3

%Moisture : 37

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP4(SIM)	
STATION LOCATION		F-SD5-1 D	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.6	2.6	U *
2-Methylnaphthalene	2.6	2.6	U *
Acenaphthylene	2.6	2.6	U *
Acenaphthene	2.6	2.6	U *
Fluorene	2.6	2.6	U *
Pentachlorophenol	5.3	5.3	UJ
Phenanthrene	2.6	2.6	U *
Anthracene	2.6	2.6	U *
Fluoranthene	2.6	2.6	U *
Pyrene	2.6	2.6	U *
Benzo(a)anthracene	2.6	2.6	U *
Chrysene	2.6	2.6	U *
Benzo(b)fluoranthene	2.6	2.6	U *
Benzo(k)fluoranthene	2.6	2.6	U *
Benzo(a)pyrene	2.6	2.6	U *
Indeno(1,2,3-cd)pyrene	2.6	2.6	U *
Dibenzo(a,h)anthracene	2.6	2.6	U *
Benzo(g,h,i)perylene	2.6	2.7	*

Weight (g) : 60.3

%Moisture : 37

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP5	
STATION LOCATION		P-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	130	130	U
Phenol	130	130	U
Bis(2-chloroethyl)ether	130	130	U
2-Chlorophenol	130	130	U
2-Methylphenol	130	130	U
2,2'-Oxybis(1-chloropropane)	130	130	U
Acetophenone	130	130	U
4-Methylphenol	130	130	U
N-Nitroso-di-n-propylamine	130	130	U
Hexachloroethane	130	130	U
Nitrobenzene	130	130	U
Isophorone	130	130	U
2-Nitrophenol	130	130	U
2,4-Dimethylphenol	130	130	U
Bis(2-chloroethoxy)methane	130	130	U
2,4-Dichlorophenol	130	130	U
Naphthalene	130	130	U
4-Chloroaniline	130	130	U
Hexachlorobutadiene	130	130	U
Caprolactam	130	130	U
4-Chloro-3-methylphenol	130	130	U
2-Methylnaphthalene	130	130	U
Hexachlorocyclopentadiene	130	130	U
2,4,6-Trichlorophenol	130	130	U
2,4,5-Trichlorophenol	130	130	U
1,1'-Biphenyl	130	130	U
2-Chloronaphthalene	130	130	U
2-Nitroaniline	240	240	U
Dimethylphthalate	130	130	U
2,6-Dinitrotoluene	130	130	U
Acenaphthylene	130	130	U
3-Nitroaniline	240	240	U
Acenaphthene	130	130	U
2,4-Dinitrophenol	240	240	U
4-Nitrophenol	240	240	U
Dibenzofuran	130	130	U
2,4-Dinitrotoluene	130	130	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP5	
STATION LOCATION		P-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	130	130	U
Fluorene	130	130	U
4-Chlorophenyl-phenylether	130	130	U
4-Nitroaniline	240	240	U
4,6-Dinitro-2-methylphenol	240	240	U
N-Nitrosodiphenylamine	130	130	U
1,2,4,5-Tetrachlorobenzene	130	130	U
4-Bromophenyl-phenylether	130	130	U
Hexachlorobenzene	130	130	U
Atrazine	130	130	U
Pentachlorophenol	240	240	U *
Phenanthrene	130	130	U
Anthracene	130	130	U
Carbazole	130	130	U
Di-n-butylphthalate	130	69	LJ
Fluoranthene	130	81	LJ
Pyrene	130	65	LJ
Butylbenzylphthalate	130	130	U
3,3'-Dichlorobenzidine	130	130	U
Benzo(a)anthracene	130	130	U
Chrysene	130	130	U
Bis(2-ethylhexyl)phthalate	130	64	LJ
Di-n-octylphthalate	130	130	U
Benzo(b)fluoranthene	130	130	U
Benzo(k)fluoranthene	130	130	U
Benzo(a)pyrene	130	130	U
Indeno(1,2,3-cd)pyrene	130	130	U
Dibenzo(a,h)anthracene	130	130	U
Benzo(g,h,i)perylene	130	130	U
2,3,4,6-Tetrachlorophenol	130	130	U

Weight (g) : 60.7

%Moisture : 33

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP5(SIM)	
STATION LOCATION		P-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.4	2.4	U *
2-Methylnaphthalene	2.4	2.4	U *
Acenaphthylene	2.4	2.9	*
Acenaphthene	2.4	2.8	*
Fluorene	2.4	2.3	*
Pentachlorophenol	4.9	4.9	UJ
Phenanthrene	2.4	28	*
Anthracene	2.4	9.0	*
Fluoranthene	2.4	88	*
Pyrene	2.4	69	*
Benzo(a)anthracene	2.4	41	*
Chrysene	2.4	41	*
Benzo(b)fluoranthene	2.4	45	*
Benzo(k)fluoranthene	2.4	17	*
Benzo(a)pyrene	2.4	36	*
Indeno(1,2,3-cd)pyrene	2.4	29	*
Dibenzo(a,h)anthracene	2.4	7.8	*
Benzo(g,h,i)perylene	2.4	27	*

Weight (g) : 60.7

%Moisture : 33

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.	F4XP5DL(SIM)		
STATION LOCATION	P-SD5-1		
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	12	12	U *
2-Methylnaphthalene	12	12	U *
Acenaphthylene	12	12	U *
Acenaphthene	12	12	U *
Fluorene	12	12	U *
Pentachlorophenol	25	25	U *
Phenanthrene	12	33	*
Anthracene	12	12	U *
Fluoranthene	12	99	*
Pyrene	12	79	*
Benzo(a)anthracene	12	45	*
Chrysene	12	48	*
Benzo(b)fluoranthene	12	44	*
Benzo(k)fluoranthene	12	19	*
Benzo(a)pyrene	12	36	*
Indeno(1,2,3-cd)pyrene	12	32	*
Dibenzo(a,h)anthracene	12	12	U *
Benzo(g,h,i)perylene	12	30	*

Weight (g) : 60.7

%Moisture : 33

Dilution Factor : 5

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP6	
STATION LOCATION		D-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	160	160	U
Phenol	160	160	U
Bis(2-chloroethyl)ether	160	160	U
2-Chlorophenol	160	160	U
2-Methylphenol	160	160	U
2,2'-Oxybis(1-chloropropane)	160	160	U
Acetophenone	160	160	U
4-Methylphenol	160	160	U
N-Nitroso-di-n-propylamine	160	160	U
Hexachloroethane	160	160	U
Nitrobenzene	160	160	U
Isophorone	160	160	U
2-Nitrophenol	160	160	U
2,4-Dimethylphenol	160	160	U
Bis(2-chloroethoxy)methane	160	160	U
2,4-Dichlorophenol	160	160	U
Naphthalene	160	160	U
4-Chloroaniline	160	160	U
Hexachlorobutadiene	160	160	U
Caprolactam	160	160	U
4-Chloro-3-methylphenol	160	160	U
2-Methylnaphthalene	160	160	U
Hexachlorocyclopentadiene	160	160	U
2,4,6-Trichlorophenol	160	160	U
2,4,5-Trichlorophenol	160	160	U
1,1'-Biphenyl	160	160	U
2-Chloronaphthalene	160	160	U
2-Nitroaniline	320	320	U
Dimethylphthalate	160	160	U
2,6-Dinitrotoluene	160	160	U
Acenaphthylene	160	160	U
3-Nitroaniline	320	320	U
Acenaphthene	160	160	U
2,4-Dinitrophenol	320	320	U
4-Nitrophenol	320	320	U
Dibenzofuran	160	160	U
2,4-Dinitrotoluene	160	160	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP6	
STATION LOCATION		D-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	160	160	U
Fluorene	160	160	U
4-Chlorophenyl-phenylether	160	160	U
4-Nitroaniline	320	320	U
4,6-Dinitro-2-methylphenol	320	320	U
N-Nitrosodiphenylamine	160	160	U
1,2,4,5-Tetrachlorobenzene	160	160	U
4-Bromophenyl-phenylether	160	160	U
Hexachlorobenzene	160	160	U
Atrazine	160	160	U
Pentachlorophenol	320	320	U *
Phenanthrene	160	160	U
Anthracene	160	160	U
Carbazole	160	160	U
Di-n-butylphthalate	160	79	LJ
Fluoranthene	160	160	U
Pyrene	160	160	U
Butylbenzylphthalate	160	160	U
3,3'-Dichlorobenzidine	160	160	U
Benzo(a)anthracene	160	160	U
Chrysene	160	160	U
Bis(2-ethylhexyl)phthalate	160	160	U
Di-n-octylphthalate	160	160	U
Benzo(b)fluoranthene	160	160	U
Benzo(k)fluoranthene	160	160	U
Benzo(a)pyrene	160	160	U
Indeno(1,2,3-cd)pyrene	160	160	U
Dibenzo(a,h)anthracene	160	160	U
Benzo(g,h,i)perylene	160	160	U
2,3,4,6-Tetrachlorophenol	160	160	U

Weight (g) : 60.8

%Moisture : 49

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP6(SIM)	
STATION LOCATION		D-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	3.2	3.2	U *
2-Methylnaphthalene	3.2	3.2	U *
Acenaphthylene	3.2	3.2	U *
Acenaphthene	3.2	3.2	U *
Fluorene	3.2	3.2	U *
Pentachlorophenol	6.5	6.5	UJ
Phenanthrene	3.2	3.2	U *
Anthracene	3.2	3.2	U *
Fluoranthene	3.2	3.2	U *
Pyrene	3.2	3.2	U *
Benzo(a)anthracene	3.2	3.2	U *
Chrysene	3.2	3.2	U *
Benzo(b)fluoranthene	3.2	3.2	U *
Benzo(k)fluoranthene	3.2	3.2	U *
Benzo(a)pyrene	3.2	3.2	U *
Indeno(1,2,3-cd)pyrene	3.2	2.9	*
Dibenzo(a,h)anthracene	3.2	3.2	U *
Benzo(g,h,i)perylene	3.2	5.1	*

Weight (g) : 60.8

%Moisture : 49

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP7	
STATION LOCATION		C-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	160	160	U
Phenol	160	160	U
Bis(2-chloroethyl)ether	160	160	U
2-Chlorophenol	160	160	U
2-Methylphenol	160	160	U
2,2'-Oxybis(1-chloropropane)	160	160	U
Acetophenone	160	160	U
4-Methylphenol	160	160	U
N-Nitroso-di-n-propylamine	160	160	U
Hexachloroethane	160	160	U
Nitrobenzene	160	160	U
Isophorone	160	160	U
2-Nitrophenol	160	160	U
2,4-Dimethylphenol	160	160	U
Bis(2-chloroethoxy)methane	160	160	U
2,4-Dichlorophenol	160	160	U
Naphthalene	160	160	U
4-Chloroaniline	160	160	U
Hexachlorobutadiene	160	160	U
Caprolactam	160	160	U
4-Chloro-3-methylphenol	160	160	U
2-Methylnaphthalene	160	160	U
Hexachlorocyclopentadiene	160	160	U
2,4,6-Trichlorophenol	160	160	U
2,4,5-Trichlorophenol	160	160	U
1,1'-Biphenyl	160	160	U
2-Chloronaphthalene	160	160	U
2-Nitroaniline	310	310	U
Dimethylphthalate	160	160	U
2,6-Dinitrotoluene	160	160	U
Acenaphthylene	160	160	U
3-Nitroaniline	310	310	U
Acenaphthene	160	160	U
2,4-Dinitrophenol	310	310	U
4-Nitrophenol	310	310	U
Dibenzofuran	160	160	U
2,4-Dinitrotoluene	160	160	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP7	
STATION LOCATION		C-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	160	160	U
Fluorene	160	160	U
4-Chlorophenyl-phenylether	160	160	U
4-Nitroaniline	310	310	U
4,6-Dinitro-2-methylphenol	310	310	U
N-Nitrosodiphenylamine	160	160	U
1,2,4,5-Tetrachlorobenzene	160	160	U
4-Bromophenyl-phenylether	160	160	U
Hexachlorobenzene	160	160	U
Atrazine	160	160	U
Pentachlorophenol	310	310	U *
Phenanthrene	160	160	U
Anthracene	160	160	U
Carbazole	160	160	U
Di-n-butylphthalate	160	160	U
Fluoranthene	160	160	U
Pyrene	160	160	U
Butylbenzylphthalate	160	160	U
3,3'-Dichlorobenzidine	160	160	U
Benzo(a)anthracene	160	160	U
Chrysene	160	160	U
Bis(2-ethylhexyl)phthalate	160	160	U
Di-n-octylphthalate	160	160	U
Benzo(b)fluoranthene	160	160	U
Benzo(k)fluoranthene	160	160	U
Benzo(a)pyrene	160	160	U
Indeno(1,2,3-cd)pyrene	160	160	U
Dibenzo(a,h)anthracene	160	160	U
Benzo(g,h,i)perylene	160	160	U
2,3,4,6-Tetrachlorophenol	160	160	U

Weight (g) : 60.1

%Moisture : 46

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP7(SIM)	
STATION LOCATION		C-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	3.1	3.1	U *
2-Methylnaphthalene	3.1	3.1	U *
Acenaphthylene	3.1	3.1	U *
Acenaphthene	3.1	3.1	U *
Fluorene	3.1	3.1	U *
Pentachlorophenol	6.2	6.2	UJ
Phenanthrene	3.1	3.1	U *
Anthracene	3.1	3.1	U *
Fluoranthene	3.1	3.1	U *
Pyrene	3.1	3.1	U *
Benzo(a)anthracene	3.1	3.1	U *
Chrysene	3.1	3.1	U *
Benzo(b)fluoranthene	3.1	3.1	U *
Benzo(k)fluoranthene	3.1	3.1	U *
Benzo(a)pyrene	3.1	3.1	U *
Indeno(1,2,3-cd)pyrene	3.1	3.1	U *
Dibenzo(a,h)anthracene	3.1	3.1	U *
Benzo(g,h,i)perylene	3.1	3.1	U *

Weight (g) : 60.1
%Moisture : 46
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP8	
STATION LOCATION		B-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	150	150	U
Phenol	150	150	U
Bis(2-chloroethyl)ether	150	150	U
2-Chlorophenol	150	150	U
2-Methylphenol	150	150	U
2,2'-Oxybis(1-chloropropane)	150	150	U
Acetophenone	150	150	U
4-Methylphenol	150	150	U
N-Nitroso-di-n-propylamine	150	150	U
Hexachloroethane	150	150	U
Nitrobenzene	150	150	U
Isophorone	150	150	U
2-Nitrophenol	150	150	U
2,4-Dimethylphenol	150	150	U
Bis(2-chloroethoxy)methane	150	150	U
2,4-Dichlorophenol	150	150	U
Naphthalene	150	150	U
4-Chloroaniline	150	150	U
Hexachlorobutadiene	150	150	U
Caprolactam	150	150	U
4-Chloro-3-methylphenol	150	150	U
2-Methylnaphthalene	150	150	U
Hexachlorocyclopentadiene	150	150	U
2,4,6-Trichlorophenol	150	150	U
2,4,5-Trichlorophenol	150	150	U
1,1'-Biphenyl	150	150	U
2-Chloronaphthalene	150	150	U
2-Nitroaniline	290	290	U
Dimethylphthalate	150	150	U
2,6-Dinitrotoluene	150	150	U
Acenaphthylene	150	150	U
3-Nitroaniline	290	290	U
Acenaphthene	150	150	U
2,4-Dinitrophenol	290	290	U
4-Nitrophenol	290	290	U
Dibenzofuran	150	150	U
2,4-Dinitrotoluene	150	150	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP8	
STATION LOCATION		B-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	150	150	U
Fluorene	150	150	U
4-Chlorophenyl-phenylether	150	150	U
4-Nitroaniline	290	290	U
4,6-Dinitro-2-methylphenol	290	290	U
N-Nitrosodiphenylamine	150	150	U
1,2,4,5-Tetrachlorobenzene	150	150	U
4-Bromophenyl-phenylether	150	150	U
Hexachlorobenzene	150	150	U
Atrazine	150	150	U
Pentachlorophenol	290	290	U *
Phenanthrene	150	150	U
Anthracene	150	150	U
Carbazole	150	150	U
Di-n-butylphthalate	150	150	U
Fluoranthene	150	150	U
Pyrene	150	150	U
Butylbenzylphthalate	150	150	U
3,3'-Dichlorobenzidine	150	150	U
Benzo(a)anthracene	150	150	U
Chrysene	150	150	U
Bis(2-ethylhexyl)phthalate	150	150	U
Di-n-octylphthalate	150	150	U
Benzo(b)fluoranthene	150	150	U
Benzo(k)fluoranthene	150	150	U
Benzo(a)pyrene	150	150	U
Indeno(1,2,3-cd)pyrene	150	150	U
Dibenzo(a,h)anthracene	150	150	U
Benzo(g,h,i)perylene	150	150	U
2,3,4,6-Tetrachlorophenol	150	150	U

Weight (g) : 60.8

%Moisture : 44

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP8(SIM)	
STATION LOCATION		B-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.9	2.9	U *
2-Methylnaphthalene	2.9	2.9	U *
Acenaphthylene	2.9	2.9	U *
Acenaphthene	2.9	2.9	U *
Fluorene	2.9	2.9	U *
Pentachlorophenol	5.9	5.9	UJ
Phenanthrene	2.9	4.9	*
Anthracene	2.9	3.1	*
Fluoranthene	2.9	14	*
Pyrene	2.9	14	*
Benzo(a)anthracene	2.9	8.3	*
Chrysene	2.9	9.3	*
Benzo(b)fluoranthene	2.9	8.8	*
Benzo(k)fluoranthene	2.9	3.3	*
Benzo(a)pyrene	2.9	7.4	*
Indeno(1,2,3-cd)pyrene	2.9	5.7	*
Dibenzo(a,h)anthracene	2.9	2.9	U *
Benzo(g,h,i)perylene	2.9	6.6	*

Weight (g) : 60.8
 %Moisture : 44
 Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP9	
STATION LOCATION		K-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	140	140	U
Phenol	140	140	U
Bis(2-chloroethyl)ether	140	140	U
2-Chlorophenol	140	140	U
2-Methylphenol	140	140	U
2,2'-Oxybis(1-chloropropane)	140	140	U
Acetophenone	140	140	U
4-Methylphenol	140	140	U
N-Nitroso-di-n-propylamine	140	140	U
Hexachloroethane	140	140	U
Nitrobenzene	140	140	U
Isophorone	140	140	U
2-Nitrophenol	140	140	U
2,4-Dimethylphenol	140	140	U
Bis(2-chloroethoxy)methane	140	140	U
2,4-Dichlorophenol	140	140	U
Naphthalene	140	140	U
4-Chloroaniline	140	140	U
Hexachlorobutadiene	140	140	U
Caprolactam	140	140	U
4-Chloro-3-methylphenol	140	140	U
2-Methylnaphthalene	140	140	U
Hexachlorocyclopentadiene	140	140	U
2,4,6-Trichlorophenol	140	140	U
2,4,5-Trichlorophenol	140	140	U
1,1'-Biphenyl	140	140	U
2-Chloronaphthalene	140	140	U
2-Nitroaniline	270	270	U
Dimethylphthalate	140	140	U
2,6-Dinitrotoluene	140	140	U
Acenaphthylene	140	140	U
3-Nitroaniline	270	270	U
Acenaphthene	140	140	U
2,4-Dinitrophenol	270	270	U
4-Nitrophenol	270	270	U
Dibenzofuran	140	140	U
2,4-Dinitrotoluene	140	140	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP9	
STATION LOCATION		K-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	140	140	U
Fluorene	140	140	U
4-Chlorophenyl-phenylether	140	140	U
4-Nitroaniline	270	270	U
4,6-Dinitro-2-methylphenol	270	270	U
N-Nitrosodiphenylamine	140	140	U
1,2,4,5-Tetrachlorobenzene	140	140	U
4-Bromophenyl-phenylether	140	140	U
Hexachlorobenzene	140	140	U
Atrazine	140	140	U
Pentachlorophenol	270	270	U *
Phenanthrene	140	140	U
Anthracene	140	140	U
Carbazole	140	140	U
Di-n-butylphthalate	140	140	U
Fluoranthene	140	140	U
Pyrene	140	140	U
Butylbenzylphthalate	140	140	U
3,3'-Dichlorobenzidine	140	140	U
Benzo(a)anthracene	140	140	U
Chrysene	140	140	U
Bis(2-ethylhexyl)phthalate	140	140	U
Di-n-octylphthalate	140	140	U
Benzo(b)fluoranthene	140	140	U
Benzo(k)fluoranthene	140	140	U
Benzo(a)pyrene	140	140	U
Indeno(1,2,3-cd)pyrene	140	140	U
Dibenzo(a,h)anthracene	140	140	U
Benzo(g,h,i)perylene	140	140	U
2,3,4,6-Tetrachlorophenol	140	140	U

Weight (g) : 60.3

%Moisture : 40

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP9(SIM)	
STATION LOCATION		K-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.7	2.6	*
2-Methylnaphthalene	2.7	2.7	U *
Acenaphthylene	2.7	3.3	*
Acenaphthene	2.7	2.7	U *
Fluorene	2.7	2.7	U *
Pentachlorophenol	5.6	5.6	U
Phenanthrene	2.7	2.7	U *
Anthracene	2.7	2.9	*
Fluoranthene	2.7	11	*
Pyrene	2.7	19	*
Benzo(a)anthracene	2.7	10	*
Chrysene	2.7	13	*
Benzo(b)fluoranthene	2.7	11	*
Benzo(k)fluoranthene	2.7	4.6	*
Benzo(a)pyrene	2.7	12	*
Indeno(1,2,3-cd)pyrene	2.7	7.4	*
Dibenzo(a,h)anthracene	2.7	3.1	*
Benzo(g,h,i)perylene	2.7	10	*

Weight (g) : 60.3

%Moisture : 40

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ0	
STATION LOCATION		Q-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	140	140	U
Phenol	140	140	U
Bis(2-chloroethyl)ether	140	140	U
2-Chlorophenol	140	140	U
2-Methylphenol	140	140	U
2,2'-Oxybis(1-chloropropane)	140	140	U
Acetophenone	140	140	U
4-Methylphenol	140	140	U
N-Nitroso-di-n-propylamine	140	140	U
Hexachloroethane	140	140	U
Nitrobenzene	140	140	U
Isophorone	140	140	U
2-Nitrophenol	140	140	U
2,4-Dimethylphenol	140	140	U
Bis(2-chloroethoxy)methane	140	140	U
2,4-Dichlorophenol	140	140	U
Naphthalene	140	140	U
4-Chloroaniline	140	140	U
Hexachlorobutadiene	140	140	U
Caprolactam	140	140	U
4-Chloro-3-methylphenol	140	140	U
2-Methylnaphthalene	140	140	U
Hexachlorocyclopentadiene	140	140	U
2,4,6-Trichlorophenol	140	140	U
2,4,5-Trichlorophenol	140	140	U
1,1'-Biphenyl	140	140	U
2-Chloronaphthalene	140	140	U
2-Nitroaniline	270	270	U
Dimethylphthalate	140	140	U
2,6-Dinitrotoluene	140	140	U
Acenaphthylene	140	140	U
3-Nitroaniline	270	270	U
Acenaphthene	140	140	U
2,4-Dinitrophenol	270	270	U
4-Nitrophenol	270	270	U
Dibenzofuran	140	140	U
2,4-Dinitrotoluene	140	140	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ0	
STATION LOCATION		Q-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	140	140	U
Fluorene	140	140	U
4-Chlorophenyl-phenylether	140	140	U
4-Nitroaniline	270	270	U
4,6-Dinitro-2-methylphenol	270	270	U
N-Nitrosodiphenylamine	140	140	U
1,2,4,5-Tetrachlorobenzene	140	140	U
4-Bromophenyl-phenylether	140	140	U
Hexachlorobenzene	140	140	U
Atrazine	140	140	U
Pentachlorophenol	270	270	U *
Phenanthrene	140	140	U
Anthracene	140	140	U
Carbazole	140	140	U
Di-n-butylphthalate	140	140	U
Fluoranthene	140	140	U
Pyrene	140	140	U
Butylbenzylphthalate	140	140	U
3,3'-Dichlorobenzidine	140	140	U
Benzo(a)anthracene	140	140	U
Chrysene	140	140	U
Bis(2-ethylhexyl)phthalate	140	140	U
Di-n-octylphthalate	140	140	U
Benzo(b)fluoranthene	140	140	U
Benzo(k)fluoranthene	140	140	U
Benzo(a)pyrene	140	140	U
Indeno(1,2,3-cd)pyrene	140	140	U
Dibenzo(a,h)anthracene	140	140	U
Benzo(g,h,i)perylene	140	140	U
2,3,4,6-Tetrachlorophenol	140	140	U

Weight (g) : 80.6

%Moisture : 55

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ0(SIM)	
STATION LOCATION		Q-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.7	2.7	*
2-Methylnaphthalene	2.7	2.7	U *
Acenaphthylene	2.7	2.7	U *
Acenaphthene	2.7	2.7	U *
Fluorene	2.7	2.5	*
Pentachlorophenol	5.5	5.5	U
Phenanthrene	2.7	8.6	*
Anthracene	2.7	2.7	U *
Fluoranthene	2.7	16	*
Pyrene	2.7	13	*
Benzo(a)anthracene	2.7	6.0	*
Chrysene	2.7	7.5	*
Benzo(b)fluoranthene	2.7	8.7	*
Benzo(k)fluoranthene	2.7	3.1	*
Benzo(a)pyrene	2.7	7.0	*
Indeno(1,2,3-cd)pyrene	2.7	6.2	*
Dibenzo(a,h)anthracene	2.7	2.7	U *
Benzo(g,h,i)perylene	2.7	8.9	*

Weight (g) : 80.6
 %Moisture : 55
 Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ1	
STATION LOCATION		M-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	150	150	U
Phenol	150	150	U
Bis(2-chloroethyl)ether	150	150	U
2-Chlorophenol	150	150	U
2-Methylphenol	150	150	U
2,2'-Oxybis(1-chloropropane)	150	150	U
Acetophenone	150	150	U
4-Methylphenol	150	150	U
N-Nitroso-di-n-propylamine	150	150	U
Hexachloroethane	150	150	U
Nitrobenzene	150	150	U
Isophorone	150	150	U
2-Nitrophenol	150	150	U
2,4-Dimethylphenol	150	150	U
Bis(2-chloroethoxy)methane	150	150	U
2,4-Dichlorophenol	150	150	U
Naphthalene	150	150	U
4-Chloroaniline	150	150	U
Hexachlorobutadiene	150	150	U
Caprolactam	150	150	U
4-Chloro-3-methylphenol	150	150	U
2-Methylnaphthalene	150	150	U
Hexachlorocyclopentadiene	150	150	U
2,4,6-Trichlorophenol	150	150	U
2,4,5-Trichlorophenol	150	150	U
1,1'-Biphenyl	150	150	U
2-Chloronaphthalene	150	150	U
2-Nitroaniline	300	300	U
Dimethylphthalate	150	150	U
2,6-Dinitrotoluene	150	150	U
Acenaphthylene	150	150	U
3-Nitroaniline	300	300	U
Acenaphthene	150	150	U
2,4-Dinitrophenol	300	300	U
4-Nitrophenol	300	300	U
Dibenzofuran	150	150	U
2,4-Dinitrotoluene	150	150	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ1	
STATION LOCATION		M-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	150	150	U
Fluorene	150	150	U
4-Chlorophenyl-phenylether	150	150	U
4-Nitroaniline	300	300	U
4,6-Dinitro-2-methylphenol	300	300	U
N-Nitrosodiphenylamine	150	150	U
1,2,4,5-Tetrachlorobenzene	150	150	U
4-Bromophenyl-phenylether	150	150	U
Hexachlorobenzene	150	150	U
Atrazine	150	150	U
Pentachlorophenol	300	300	U *
Phenanthrene	150	150	U
Anthracene	150	150	U
Carbazole	150	150	U
Di-n-butylphthalate	150	65	LJ
Fluoranthene	150	150	U
Pyrene	150	150	U
Butylbenzylphthalate	150	150	U
3,3'-Dichlorobenzidine	150	150	U
Benzo(a)anthracene	150	150	U
Chrysene	150	150	U
Bis(2-ethylhexyl)phthalate	150	150	U
Di-n-octylphthalate	150	150	U
Benzo(b)fluoranthene	150	150	U
Benzo(k)fluoranthene	150	150	U
Benzo(a)pyrene	150	150	U
Indeno(1,2,3-cd)pyrene	150	150	U
Dibenzo(a,h)anthracene	150	150	U
Benzo(g,h,i)perylene	150	150	U
2,3,4,6-Tetrachlorophenol	150	150	U

Weight (g) : 80.3

%Moisture : 59

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ1(SIM)	
STATION LOCATION		M-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	3.0	3.0	*
2-Methylnaphthalene	3.0	3.0	U *
Acenaphthylene	3.0	3.0	U *
Acenaphthene	3.0	3.0	U *
Fluorene	3.0	3.0	U *
Pentachlorophenol	6.1	6.1	U
Phenanthrene	3.0	3.0	U *
Anthracene	3.0	3.0	U *
Fluoranthene	3.0	3.2	*
Pyrene	3.0	3.7	*
Benzo(a)anthracene	3.0	3.0	U *
Chrysene	3.0	3.3	*
Benzo(b)fluoranthene	3.0	3.9	*
Benzo(k)fluoranthene	3.0	3.0	U *
Benzo(a)pyrene	3.0	3.2	*
Indeno(1,2,3-cd)pyrene	3.0	3.4	*
Dibenzo(a,h)anthracene	3.0	3.0	U *
Benzo(g,h,i)perylene	3.0	5.4	*

Weight (g) : 80.3

%Moisture : 59

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ2	
STATION LOCATION		O-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	140	140	U
Phenol	140	140	U
Bis(2-chloroethyl)ether	140	140	U
2-Chlorophenol	140	140	U
2-Methylphenol	140	140	U
2,2'-Oxybis(1-chloropropane)	140	140	U
Acetophenone	140	140	U
4-Methylphenol	140	140	U
N-Nitroso-di-n-propylamine	140	140	U
Hexachloroethane	140	140	U
Nitrobenzene	140	140	U
Isophorone	140	140	U
2-Nitrophenol	140	140	U
2,4-Dimethylphenol	140	140	U
Bis(2-chloroethoxy)methane	140	140	U
2,4-Dichlorophenol	140	140	U
Naphthalene	140	140	U
4-Chloroaniline	140	140	U
Hexachlorobutadiene	140	140	U
Caprolactam	140	140	U
4-Chloro-3-methylphenol	140	140	U
2-Methylnaphthalene	140	140	U
Hexachlorocyclopentadiene	140	140	U
2,4,6-Trichlorophenol	140	140	U
2,4,5-Trichlorophenol	140	140	U
1,1'-Biphenyl	140	140	U
2-Chloronaphthalene	140	140	U
2-Nitroaniline	280	280	U
Dimethylphthalate	140	140	U
2,6-Dinitrotoluene	140	140	U
Acenaphthylene	140	140	U
3-Nitroaniline	280	280	U
Acenaphthene	140	140	U
2,4-Dinitrophenol	280	280	U
4-Nitrophenol	280	280	U
Dibenzofuran	140	140	U
2,4-Dinitrotoluene	140	140	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ2	
STATION LOCATION		O-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	140	140	U
Fluorene	140	140	U
4-Chlorophenyl-phenylether	140	140	U
4-Nitroaniline	280	280	U
4,6-Dinitro-2-methylphenol	280	280	U
N-Nitrosodiphenylamine	140	140	U
1,2,4,5-Tetrachlorobenzene	140	140	U
4-Bromophenyl-phenylether	140	140	U
Hexachlorobenzene	140	140	U
Atrazine	140	140	U
Pentachlorophenol	280	280	U *
Phenanthrene	140	140	U
Anthracene	140	140	U
Carbazole	140	140	U
Di-n-butylphthalate	140	140	U
Fluoranthene	140	140	U
Pyrene	140	140	U
Butylbenzylphthalate	140	140	U
3,3'-Dichlorobenzidine	140	140	U
Benzo(a)anthracene	140	140	U
Chrysene	140	140	U
Bis(2-ethylhexyl)phthalate	140	66	LJ
Di-n-octylphthalate	140	140	U
Benzo(b)fluoranthene	140	140	U
Benzo(k)fluoranthene	140	140	U
Benzo(a)pyrene	140	140	U
Indeno(1,2,3-cd)pyrene	140	140	U
Dibenzo(a,h)anthracene	140	140	U
Benzo(g,h,i)perylene	140	140	U
2,3,4,6-Tetrachlorophenol	140	140	U

Weight (g) : 60.7

%Moisture : 42

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ2(SIM)	
STATION LOCATION		O-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.8	3.2	*
2-Methylnaphthalene	2.8	3.7	*
Acenaphthylene	2.8	5.2	*
Acenaphthene	2.8	2.8	U *
Fluorene	2.8	2.8	U *
Pentachlorophenol	5.7	5.7	U
Phenanthrene	2.8	5.2	*
Anthracene	2.8	4.2	*
Fluoranthene	2.8	11	*
Pyrene	2.8	13	*
Benzo(a)anthracene	2.8	9.6	*
Chrysene	2.8	13	*
Benzo(b)fluoranthene	2.8	13	*
Benzo(k)fluoranthene	2.8	4.1	*
Benzo(a)pyrene	2.8	13	*
Indeno(1,2,3-cd)pyrene	2.8	9.0	*
Dibenzo(a,h)anthracene	2.8	3.6	*
Benzo(g,h,i)perylene	2.8	13	*

Weight (g) : 60.7

%Moisture : 42

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ3	
STATION LOCATION		A-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	160	160	U
Phenol	160	160	U
Bis(2-chloroethyl)ether	160	160	U
2-Chlorophenol	160	160	U
2-Methylphenol	160	160	U
2,2'-Oxybis(1-chloropropane)	160	160	U
Acetophenone	160	160	U
4-Methylphenol	160	160	U
N-Nitroso-di-n-propylamine	160	160	U
Hexachloroethane	160	160	U
Nitrobenzene	160	160	U
Isophorone	160	160	U
2-Nitrophenol	160	160	U
2,4-Dimethylphenol	160	160	U
Bis(2-chloroethoxy)methane	160	160	U
2,4-Dichlorophenol	160	160	U
Naphthalene	160	160	U
4-Chloroaniline	160	160	U
Hexachlorobutadiene	160	160	U
Caprolactam	160	160	U
4-Chloro-3-methylphenol	160	160	U
2-Methylnaphthalene	160	160	U
Hexachlorocyclopentadiene	160	160	U
2,4,6-Trichlorophenol	160	160	U
2,4,5-Trichlorophenol	160	160	U
1,1'-Biphenyl	160	160	U
2-Chloronaphthalene	160	160	U
2-Nitroaniline	310	310	U
Dimethylphthalate	160	160	U
2,6-Dinitrotoluene	160	160	U
Acenaphthylene	160	160	U
3-Nitroaniline	310	310	U
Acenaphthene	160	160	U
2,4-Dinitrophenol	310	310	U
4-Nitrophenol	310	310	U
Dibenzofuran	160	160	U
2,4-Dinitrotoluene	160	160	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ3	
STATION LOCATION		A-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	160	160	U
Fluorene	160	160	U
4-Chlorophenyl-phenylether	160	160	U
4-Nitroaniline	310	310	U
4,6-Dinitro-2-methylphenol	310	310	U
N-Nitrosodiphenylamine	160	160	U
1,2,4,5-Tetrachlorobenzene	160	160	U
4-Bromophenyl-phenylether	160	160	U
Hexachlorobenzene	160	160	U
Atrazine	160	160	U
Pentachlorophenol	310	310	U *
Phenanthrene	160	160	U
Anthracene	160	160	U
Carbazole	160	160	U
Di-n-butylphthalate	160	160	U
Fluoranthene	160	160	U
Pyrene	160	160	U
Butylbenzylphthalate	160	160	U
3,3'-Dichlorobenzidine	160	160	U
Benzo(a)anthracene	160	160	U
Chrysene	160	160	U
Bis(2-ethylhexyl)phthalate	160	150	LJ
Di-n-octylphthalate	160	160	U
Benzo(b)fluoranthene	160	160	U
Benzo(k)fluoranthene	160	160	U
Benzo(a)pyrene	160	160	U
Indeno(1,2,3-cd)pyrene	160	160	U
Dibenzo(a,h)anthracene	160	160	U
Benzo(g,h,i)perylene	160	160	U
2,3,4,6-Tetrachlorophenol	160	160	U

Weight (g) : 60.4

%Moisture : 47

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ3(SIM)	
STATION LOCATION		A-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	3.1	4.5	*
2-Methylnaphthalene	3.1	4.4	*
Acenaphthylene	3.1	13	*
Acenaphthene	3.1	5.7	*
Fluorene	3.1	3.5	*
Pentachlorophenol	6.3	6.3	U
Phenanthrene	3.1	15	*
Anthracene	3.1	18	*
Fluoranthene	3.1	37	*
Pyrene	3.1	42	*
Benzo(a)anthracene	3.1	19	*
Chrysene	3.1	26	*
Benzo(b)fluoranthene	3.1	27	*
Benzo(k)fluoranthene	3.1	8.7	*
Benzo(a)pyrene	3.1	26	*
Indeno(1,2,3-cd)pyrene	3.1	18	*
Dibenzo(a,h)anthracene	3.1	7.6	*
Benzo(g,h,i)perylene	3.1	23	*

Weight (g) : 60.4

%Moisture : 47

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.	F4XQ3DL(SIM)		
STATION LOCATION	A-SD5-1		
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	15	15	U *
2-Methylnaphthalene	15	15	U *
Acenaphthylene	15	15	*
Acenaphthene	15	15	U *
Fluorene	15	15	U *
Pentachlorophenol	31	31	U *
Phenanthrene	15	17	*
Anthracene	15	21	*
Fluoranthene	15	44	*
Pyrene	15	45	*
Benzo(a)anthracene	15	21	*
Chrysene	15	30	*
Benzo(b)fluoranthene	15	23	*
Benzo(k)fluoranthene	15	15	U *
Benzo(a)pyrene	15	21	*
Indeno(1,2,3-cd)pyrene	15	17	*
Dibenzo(a,h)anthracene	15	15	U *
Benzo(g,h,i)perylene	15	21	*

Weight (g) : 60.4
%Moisture : 47
Dilution Factor : 5

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ4	
STATION LOCATION		A-SD5-1 D	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	160	160	U
Phenol	160	160	U
Bis(2-chloroethyl)ether	160	160	U
2-Chlorophenol	160	160	U
2-Methylphenol	160	160	U
2,2'-Oxybis(1-chloropropane)	160	160	U
Acetophenone	160	160	U
4-Methylphenol	160	160	U
N-Nitroso-di-n-propylamine	160	160	U
Hexachloroethane	160	160	U
Nitrobenzene	160	160	U
Isophorone	160	160	U
2-Nitrophenol	160	160	U
2,4-Dimethylphenol	160	160	U
Bis(2-chloroethoxy)methane	160	160	U
2,4-Dichlorophenol	160	160	U
Naphthalene	160	160	U
4-Chloroaniline	160	160	U
Hexachlorobutadiene	160	160	U
Caprolactam	160	160	U
4-Chloro-3-methylphenol	160	160	U
2-Methylnaphthalene	160	160	U
Hexachlorocyclopentadiene	160	160	U
2,4,6-Trichlorophenol	160	160	U
2,4,5-Trichlorophenol	160	160	U
1,1'-Biphenyl	160	160	U
2-Chloronaphthalene	160	160	U
2-Nitroaniline	320	320	U
Dimethylphthalate	160	160	U
2,6-Dinitrotoluene	160	160	U
Acenaphthylene	160	160	U
3-Nitroaniline	320	320	U
Acenaphthene	160	160	U
2,4-Dinitrophenol	320	320	U
4-Nitrophenol	320	320	U
Dibenzofuran	160	160	U
2,4-Dinitrotoluene	160	160	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ4	
STATION LOCATION		A-SD5-1 D	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	160	160	U
Fluorene	160	160	U
4-Chlorophenyl-phenylether	160	160	U
4-Nitroaniline	320	320	U
4,6-Dinitro-2-methylphenol	320	320	U
N-Nitrosodiphenylamine	160	160	U
1,2,4,5-Tetrachlorobenzene	160	160	U
4-Bromophenyl-phenylether	160	160	U
Hexachlorobenzene	160	160	U
Atrazine	160	160	U
Pentachlorophenol	320	320	U *
Phenanthrene	160	160	U
Anthracene	160	160	U
Carbazole	160	160	U
Di-n-butylphthalate	160	77	LJ
Fluoranthene	160	160	U
Pyrene	160	160	U
Butylbenzylphthalate	160	160	U
3,3'-Dichlorobenzidine	160	160	U
Benzo(a)anthracene	160	160	U
Chrysene	160	160	U
Bis(2-ethylhexyl)phthalate	160	110	LJ
Di-n-octylphthalate	160	160	U
Benzo(b)fluoranthene	160	160	U
Benzo(k)fluoranthene	160	160	U
Benzo(a)pyrene	160	160	U
Indeno(1,2,3-cd)pyrene	160	160	U
Dibenzo(a,h)anthracene	160	160	U
Benzo(g,h,i)perylene	160	160	U
2,3,4,6-Tetrachlorophenol	160	160	U

Weight (g) : 60.8

%Moisture : 49

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ4(SIM)	
STATION LOCATION		A-SD5-1 D	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	3.2	3.7	*
2-Methylnaphthalene	3.2	4.4	*
Acenaphthylene	3.2	19	*
Acenaphthene	3.2	7.5	*
Fluorene	3.2	5.2	*
Pentachlorophenol	6.5	6.5	U
Phenanthrene	3.2	12	*
Anthracene	3.2	8.9	*
Fluoranthene	3.2	19	*
Pyrene	3.2	29	*
Benzo(a)anthracene	3.2	13	*
Chrysene	3.2	18	*
Benzo(b)fluoranthene	3.2	24	*
Benzo(k)fluoranthene	3.2	7.6	*
Benzo(a)pyrene	3.2	27	*
Indeno(1,2,3-cd)pyrene	3.2	16	*
Dibenzo(a,h)anthracene	3.2	7.1	*
Benzo(g,h,i)perylene	3.2	21	*

Weight (g) : 60.8
%Moisture : 49
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ5	
STATION LOCATION		E-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	130	130	U
Phenol	130	130	U
Bis(2-chloroethyl)ether	130	130	U
2-Chlorophenol	130	130	U
2-Methylphenol	130	130	U
2,2'-Oxybis(1-chloropropane)	130	130	U
Acetophenone	130	130	U
4-Methylphenol	130	130	U
N-Nitroso-di-n-propylamine	130	130	U
Hexachloroethane	130	130	U
Nitrobenzene	130	130	U
Isophorone	130	130	U
2-Nitrophenol	130	130	U
2,4-Dimethylphenol	130	130	U
Bis(2-chloroethoxy)methane	130	130	U
2,4-Dichlorophenol	130	130	U
Naphthalene	130	130	U
4-Chloroaniline	130	130	U
Hexachlorobutadiene	130	130	U
Caprolactam	130	130	U
4-Chloro-3-methylphenol	130	130	U
2-Methylnaphthalene	130	130	U
Hexachlorocyclopentadiene	130	130	U
2,4,6-Trichlorophenol	130	130	U
2,4,5-Trichlorophenol	130	130	U
1,1'-Biphenyl	130	130	U
2-Chloronaphthalene	130	130	U
2-Nitroaniline	250	250	U
Dimethylphthalate	130	130	U
2,6-Dinitrotoluene	130	130	U
Acenaphthylene	130	130	U
3-Nitroaniline	250	250	U
Acenaphthene	130	130	U
2,4-Dinitrophenol	250	250	U
4-Nitrophenol	250	250	U
Dibenzofuran	130	130	U
2,4-Dinitrotoluene	130	130	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ5	
STATION LOCATION		E-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	130	130	U
Fluorene	130	130	U
4-Chlorophenyl-phenylether	130	130	U
4-Nitroaniline	250	250	U
4,6-Dinitro-2-methylphenol	250	250	U
N-Nitrosodiphenylamine	130	130	U
1,2,4,5-Tetrachlorobenzene	130	130	U
4-Bromophenyl-phenylether	130	130	U
Hexachlorobenzene	130	130	U
Atrazine	130	130	U
Pentachlorophenol	250	250	U *
Phenanthrene	130	130	U
Anthracene	130	130	U
Carbazole	130	130	U
Di-n-butylphthalate	130	59	LJ
Fluoranthene	130	130	U
Pyrene	130	130	U
Butylbenzylphthalate	130	130	U
3,3'-Dichlorobenzidine	130	130	U
Benzo(a)anthracene	130	130	U
Chrysene	130	130	U
Bis(2-ethylhexyl)phthalate	130	130	U
Di-n-octylphthalate	130	130	U
Benzo(b)fluoranthene	130	130	U
Benzo(k)fluoranthene	130	130	U
Benzo(a)pyrene	130	130	U
Indeno(1,2,3-cd)pyrene	130	130	U
Dibenzo(a,h)anthracene	130	130	U
Benzo(g,h,i)perylene	130	130	U
2,3,4,6-Tetrachlorophenol	130	130	U

Weight (g) : 60.9

%Moisture : 36

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ5(SIM)	
STATION LOCATION		E-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.5	2.5	U *
2-Methylnaphthalene	2.5	2.5	*
Acenaphthylene	2.5	2.5	U *
Acenaphthene	2.5	2.5	U *
Fluorene	2.5	2.5	U *
Pentachlorophenol	5.2	5.2	UJ
Phenanthrene	2.5	2.5	U *
Anthracene	2.5	2.5	U *
Fluoranthene	2.5	4.7	*
Pyrene	2.5	5.9	*
Benzo(a)anthracene	2.5	2.6	*
Chrysene	2.5	3.5	*
Benzo(b)fluoranthene	2.5	2.7	*
Benzo(k)fluoranthene	2.5	2.5	U *
Benzo(a)pyrene	2.5	2.4	*
Indeno(1,2,3-cd)pyrene	2.5	2.5	U *
Dibenzo(a,h)anthracene	2.5	2.5	U *
Benzo(g,h,i)perylene	2.5	3.5	*

Weight (g) : 60.9

%Moisture : 36

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ6	
STATION LOCATION		J-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	130	130	U
Phenol	130	130	U
Bis(2-chloroethyl)ether	130	130	U
2-Chlorophenol	130	130	U
2-Methylphenol	130	130	U
2,2'-Oxybis(1-chloropropane)	130	130	U
Acetophenone	130	130	U
4-Methylphenol	130	130	U
N-Nitroso-di-n-propylamine	130	130	U
Hexachloroethane	130	130	U
Nitrobenzene	130	130	U
Isophorone	130	130	U
2-Nitrophenol	130	130	U
2,4-Dimethylphenol	130	130	U
Bis(2-chloroethoxy)methane	130	130	U
2,4-Dichlorophenol	130	130	U
Naphthalene	130	130	U
4-Chloroaniline	130	130	U
Hexachlorobutadiene	130	130	U
Caprolactam	130	130	U
4-Chloro-3-methylphenol	130	130	U
2-Methylnaphthalene	130	130	U
Hexachlorocyclopentadiene	130	130	U
2,4,6-Trichlorophenol	130	130	U
2,4,5-Trichlorophenol	130	130	U
1,1'-Biphenyl	130	130	U
2-Chloronaphthalene	130	130	U
2-Nitroaniline	260	260	U
Dimethylphthalate	130	130	U
2,6-Dinitrotoluene	130	130	U
Acenaphthylene	130	130	U
3-Nitroaniline	260	260	U
Acenaphthene	130	130	U
2,4-Dinitrophenol	260	260	U
4-Nitrophenol	260	260	U
Dibenzofuran	130	130	U
2,4-Dinitrotoluene	130	130	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ6	
STATION LOCATION		J-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	130	130	U
Fluorene	130	130	U
4-Chlorophenyl-phenylether	130	130	U
4-Nitroaniline	260	260	U
4,6-Dinitro-2-methylphenol	260	260	U
N-Nitrosodiphenylamine	130	130	U
1,2,4,5-Tetrachlorobenzene	130	130	U
4-Bromophenyl-phenylether	130	130	U
Hexachlorobenzene	130	130	U
Atrazine	130	130	U
Pentachlorophenol	260	260	U *
Phenanthrene	130	130	U
Anthracene	130	130	U
Carbazole	130	130	U
Di-n-butylphthalate	130	130	U
Fluoranthene	130	130	U
Pyrene	130	64	LJ
Butylbenzylphthalate	130	130	U
3,3'-Dichlorobenzidine	130	130	U
Benzo(a)anthracene	130	130	U
Chrysene	130	130	U
Bis(2-ethylhexyl)phthalate	130	53	LJ
Di-n-octylphthalate	130	130	U
Benzo(b)fluoranthene	130	130	U
Benzo(k)fluoranthene	130	130	U
Benzo(a)pyrene	130	130	U
Indeno(1,2,3-cd)pyrene	130	130	U
Dibenzo(a,h)anthracene	130	130	U
Benzo(g,h,i)perylene	130	130	U
2,3,4,6-Tetrachlorophenol	130	130	U

Weight (g) : 60.6

%Moisture : 37

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ6(SIM)	
STATION LOCATION		J-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.6	2.7	*
2-Methylnaphthalene	2.6	3.8	*
Acenaphthylene	2.6	11	*
Acenaphthene	2.6	4.3	*
Fluorene	2.6	4.4	*
Pentachlorophenol	5.3	5.3	U
Phenanthrene	2.6	16	*
Anthracene	2.6	11	*
Fluoranthene	2.6	37	*
Pyrene	2.6	51	*
Benzo(a)anthracene	2.6	21	*
Chrysene	2.6	30	*
Benzo(b)fluoranthene	2.6	20	*
Benzo(k)fluoranthene	2.6	5.8	*
Benzo(a)pyrene	2.6	17	*
Indeno(1,2,3-cd)pyrene	2.6	11	*
Dibenzo(a,h)anthracene	2.6	5.3	*
Benzo(g,h,i)perylene	2.6	14	*

Weight (g) : 60.6

%Moisture : 37

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ6DL(SIM)	
STATION LOCATION		J-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	13	13	U *
2-Methylnaphthalene	13	13	U *
Acenaphthylene	13	14	*
Acenaphthene	13	13	U *
Fluorene	13	13	U *
Pentachlorophenol	26	26	U *
Phenanthrene	13	19	*
Anthracene	13	13	*
Fluoranthene	13	45	*
Pyrene	13	56	*
Benzo(a)anthracene	13	25	*
Chrysene	13	35	*
Benzo(b)fluoranthene	13	19	*
Benzo(k)fluoranthene	13	13	U *
Benzo(a)pyrene	13	16	*
Indeno(1,2,3-cd)pyrene	13	13	U *
Dibenzo(a,h)anthracene	13	13	U *
Benzo(g,h,i)perylene	13	14	*

Weight (g) : 60.6
%Moisture : 37
Dilution Factor : 5

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ7	
STATION LOCATION		H-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	130	130	U
Phenol	130	130	U
Bis(2-chloroethyl)ether	130	130	U
2-Chlorophenol	130	130	U
2-Methylphenol	130	130	U
2,2'-Oxybis(1-chloropropane)	130	130	U
Acetophenone	130	130	U
4-Methylphenol	130	130	U
N-Nitroso-di-n-propylamine	130	130	U
Hexachloroethane	130	130	U
Nitrobenzene	130	130	U
Isophorone	130	130	U
2-Nitrophenol	130	130	U
2,4-Dimethylphenol	130	130	U
Bis(2-chloroethoxy)methane	130	130	U
2,4-Dichlorophenol	130	130	U
Naphthalene	130	130	U
4-Chloroaniline	130	130	U
Hexachlorobutadiene	130	130	U
Caprolactam	130	130	U
4-Chloro-3-methylphenol	130	130	U
2-Methylnaphthalene	130	130	U
Hexachlorocyclopentadiene	130	130	U
2,4,6-Trichlorophenol	130	130	U
2,4,5-Trichlorophenol	130	130	U
1,1'-Biphenyl	130	130	U
2-Chloronaphthalene	130	130	U
2-Nitroaniline	260	260	U
Dimethylphthalate	130	130	U
2,6-Dinitrotoluene	130	130	U
Acenaphthylene	130	130	U
3-Nitroaniline	260	260	U
Acenaphthene	130	130	U
2,4-Dinitrophenol	260	260	U
4-Nitrophenol	260	260	U
Dibenzofuran	130	130	U
2,4-Dinitrotoluene	130	130	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ7	
STATION LOCATION		H-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	130	130	U
Fluorene	130	130	U
4-Chlorophenyl-phenylether	130	130	U
4-Nitroaniline	260	260	U
4,6-Dinitro-2-methylphenol	260	260	U
N-Nitrosodiphenylamine	130	130	U
1,2,4,5-Tetrachlorobenzene	130	130	U
4-Bromophenyl-phenylether	130	130	U
Hexachlorobenzene	130	130	U
Atrazine	130	130	U
Pentachlorophenol	260	260	U *
Phenanthrene	130	130	U
Anthracene	130	130	U
Carbazole	130	130	U
Di-n-butylphthalate	130	64	LJ
Fluoranthene	130	79	LJ
Pyrene	130	79	LJ
Butylbenzylphthalate	130	130	U
3,3'-Dichlorobenzidine	130	130	U
Benzo(a)anthracene	130	130	U
Chrysene	130	53	LJ
Bis(2-ethylhexyl)phthalate	130	53	LJ
Di-n-octylphthalate	130	130	U
Benzo(b)fluoranthene	130	130	U
Benzo(k)fluoranthene	130	130	U
Benzo(a)pyrene	130	130	U
Indeno(1,2,3-cd)pyrene	130	130	U
Dibenzo(a,h)anthracene	130	130	U
Benzo(g,h,i)perylene	130	130	U
2,3,4,6-Tetrachlorophenol	130	130	U

Weight (g) : 60.3

%Moisture : 37

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ7(SIM)	
STATION LOCATION		H-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	2.6	3.4	*
2-Methylnaphthalene	2.6	2.9	*
Acenaphthylene	2.6	13	*
Acenaphthene	2.6	3.0	*
Fluorene	2.6	3.4	*
Pentachlorophenol	5.3	5.3	U
Phenanthrene	2.6	20	*
Anthracene	2.6	17	*
Fluoranthene	2.6	84	*
Pyrene	2.6	77	*
Benzo(a)anthracene	2.6	44	*
Chrysene	2.6	52	*
Benzo(b)fluoranthene	2.6	56	*
Benzo(k)fluoranthene	2.6	18	*
Benzo(a)pyrene	2.6	41	*
Indeno(1,2,3-cd)pyrene	2.6	26	*
Dibenzo(a,h)anthracene	2.6	9.8	*
Benzo(g,h,i)perylene	2.6	26	*

Weight (g) : 60.3

%Moisture : 37

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ7DL(SIM)	
STATION LOCATION		H-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	13	13	U *
2-Methylnaphthalene	13	13	U *
Acenaphthylene	13	12	*
Acenaphthene	13	13	U *
Fluorene	13	13	U *
Pentachlorophenol	26	26	U *
Phenanthrene	13	22	*
Anthracene	13	19	*
Fluoranthene	13	89	*
Pyrene	13	79	*
Benzo(a)anthracene	13	44	*
Chrysene	13	54	*
Benzo(b)fluoranthene	13	47	*
Benzo(k)fluoranthene	13	16	*
Benzo(a)pyrene	13	34	*
Indeno(1,2,3-cd)pyrene	13	23	*
Dibenzo(a,h)anthracene	13	13	U *
Benzo(g,h,i)perylene	13	23	*

Weight (g) : 60.3
%Moisture : 37
Dilution Factor : 5

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ8	
STATION LOCATION		R-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	170	170	U
Phenol	170	170	U
Bis(2-chloroethyl)ether	170	170	U
2-Chlorophenol	170	170	U
2-Methylphenol	170	170	U
2,2'-Oxybis(1-chloropropane)	170	170	U
Acetophenone	170	170	U
4-Methylphenol	170	170	U
N-Nitroso-di-n-propylamine	170	170	U
Hexachloroethane	170	170	U
Nitrobenzene	170	170	U
Isophorone	170	170	U
2-Nitrophenol	170	170	U
2,4-Dimethylphenol	170	170	U
Bis(2-chloroethoxy)methane	170	170	U
2,4-Dichlorophenol	170	170	U
Naphthalene	170	170	U
4-Chloroaniline	170	170	U
Hexachlorobutadiene	170	170	U
Caprolactam	170	170	U
4-Chloro-3-methylphenol	170	170	U
2-Methylnaphthalene	170	170	U
Hexachlorocyclopentadiene	170	170	U
2,4,6-Trichlorophenol	170	170	U
2,4,5-Trichlorophenol	170	170	U
1,1'-Biphenyl	170	170	U
2-Chloronaphthalene	170	170	U
2-Nitroaniline	320	320	U
Dimethylphthalate	170	170	U
2,6-Dinitrotoluene	170	170	U
Acenaphthylene	170	170	U
3-Nitroaniline	320	320	U
Acenaphthene	170	170	U
2,4-Dinitrophenol	320	320	U
4-Nitrophenol	320	320	U
Dibenzofuran	170	170	U
2,4-Dinitrotoluene	170	170	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ8	
STATION LOCATION		R-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	170	170	U
Fluorene	170	170	U
4-Chlorophenyl-phenylether	170	170	U
4-Nitroaniline	320	320	U
4,6-Dinitro-2-methylphenol	320	320	U
N-Nitrosodiphenylamine	170	170	U
1,2,4,5-Tetrachlorobenzene	170	170	U
4-Bromophenyl-phenylether	170	170	U
Hexachlorobenzene	170	170	U
Atrazine	170	170	U
Pentachlorophenol	320	320	U *
Phenanthrene	170	170	U
Anthracene	170	170	U
Carbazole	170	170	U
Di-n-butylphthalate	170	170	U
Fluoranthene	170	170	U
Pyrene	170	170	U
Butylbenzylphthalate	170	170	U
3,3'-Dichlorobenzidine	170	170	U
Benzo(a)anthracene	170	170	U
Chrysene	170	170	U
Bis(2-ethylhexyl)phthalate	170	170	U
Di-n-octylphthalate	170	170	U
Benzo(b)fluoranthene	170	170	U
Benzo(k)fluoranthene	170	170	U
Benzo(a)pyrene	170	170	U
Indeno(1,2,3-cd)pyrene	170	170	U
Dibenzo(a,h)anthracene	170	170	U
Benzo(g,h,i)perylene	170	170	U
2,3,4,6-Tetrachlorophenol	170	170	U

Weight (g) : 80.7

%Moisture : 62

Dilution Factor : 1

Number of TIC's : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ8(SIM)	
STATION LOCATION		R-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	3.2	3.2	*
2-Methylnaphthalene	3.2	3.2	U *
Acenaphthylene	3.2	3.1	*
Acenaphthene	3.2	3.2	U *
Fluorene	3.2	3.2	U *
Pentachlorophenol	6.6	6.6	U
Phenanthrene	3.2	4.6	*
Anthracene	3.2	3.2	U *
Fluoranthene	3.2	9.4	*
Pyrene	3.2	9.5	*
Benzo(a)anthracene	3.2	5.5	*
Chrysene	3.2	7.1	*
Benzo(b)fluoranthene	3.2	7.8	*
Benzo(k)fluoranthene	3.2	3.2	U *
Benzo(a)pyrene	3.2	5.9	*
Indeno(1,2,3-cd)pyrene	3.2	6.1	*
Dibenzo(a,h)anthracene	3.2	3.2	U *
Benzo(g,h,i)perylene	3.2	9.3	*

Weight (g) : 80.7

%Moisture : 62

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ9	
STATION LOCATION		S-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	150	150	U
Phenol	150	150	U
Bis(2-chloroethyl)ether	150	150	U
2-Chlorophenol	150	150	U
2-Methylphenol	150	150	U
2,2'-Oxybis(1-chloropropane)	150	150	U
Acetophenone	150	150	U
4-Methylphenol	150	150	U
N-Nitroso-di-n-propylamine	150	150	U
Hexachloroethane	150	150	U
Nitrobenzene	150	150	U
Isophorone	150	150	U
2-Nitrophenol	150	150	U
2,4-Dimethylphenol	150	150	U
Bis(2-chloroethoxy)methane	150	150	U
2,4-Dichlorophenol	150	150	U
Naphthalene	150	150	U
4-Chloroaniline	150	150	U
Hexachlorobutadiene	150	150	U
Caprolactam	150	150	U
4-Chloro-3-methylphenol	150	150	U
2-Methylnaphthalene	150	150	U
Hexachlorocyclopentadiene	150	150	U
2,4,6-Trichlorophenol	150	150	U
2,4,5-Trichlorophenol	150	150	U
1,1'-Biphenyl	150	150	U
2-Chloronaphthalene	150	150	U
2-Nitroaniline	300	300	U
Dimethylphthalate	150	150	U
2,6-Dinitrotoluene	150	150	U
Acenaphthylene	150	150	U
3-Nitroaniline	300	300	U
Acenaphthene	150	150	U
2,4-Dinitrophenol	300	300	U
4-Nitrophenol	300	300	U
Dibenzofuran	150	150	U
2,4-Dinitrotoluene	150	150	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ9	
STATION LOCATION		S-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	150	150	U
Fluorene	150	150	U
4-Chlorophenyl-phenylether	150	150	U
4-Nitroaniline	300	300	U
4,6-Dinitro-2-methylphenol	300	300	U
N-Nitrosodiphenylamine	150	150	U
1,2,4,5-Tetrachlorobenzene	150	150	U
4-Bromophenyl-phenylether	150	150	U
Hexachlorobenzene	150	150	U
Atrazine	150	150	U
Pentachlorophenol	300	300	U *
Phenanthrene	150	150	U
Anthracene	150	150	U
Carbazole	150	150	U
Di-n-butylphthalate	150	150	U
Fluoranthene	150	150	U
Pyrene	150	150	U
Butylbenzylphthalate	150	150	U
3,3'-Dichlorobenzidine	150	150	U
Benzo(a)anthracene	150	150	U
Chrysene	150	150	U
Bis(2-ethylhexyl)phthalate	150	100	LJ
Di-n-octylphthalate	150	150	U
Benzo(b)fluoranthene	150	150	U
Benzo(k)fluoranthene	150	150	U
Benzo(a)pyrene	150	150	U
Indeno(1,2,3-cd)pyrene	150	150	U
Dibenzo(a,h)anthracene	150	150	U
Benzo(g,h,i)perylene	150	150	U
2,3,4,6-Tetrachlorophenol	150	150	U

Weight (g) : 60.6

%Moisture : 45

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ9(SIM)	
STATION LOCATION		S-SD5-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	3.0	3.1	*
2-Methylnaphthalene	3.0	3.0	U *
Acenaphthylene	3.0	6.4	*
Acenaphthene	3.0	3.0	U *
Fluorene	3.0	3.0	U *
Pentachlorophenol	6.0	6.0	U
Phenanthrene	3.0	4.3	*
Anthracene	3.0	3.8	*
Fluoranthene	3.0	9.7	*
Pyrene	3.0	10	*
Benzo(a)anthracene	3.0	7.4	*
Chrysene	3.0	9.8	*
Benzo(b)fluoranthene	3.0	11	*
Benzo(k)fluoranthene	3.0	3.7	*
Benzo(a)pyrene	3.0	9.0	*
Indeno(1,2,3-cd)pyrene	3.0	7.7	*
Dibenzo(a,h)anthracene	3.0	3.1	*
Benzo(g,h,i)perylene	3.0	9.5	*

Weight (g) : 60.6
%Moisture : 45
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP0	
STATION LOCATION		N-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.6	2.6	U
beta-BHC	2.6	2.6	U
delta-BHC	2.6	2.6	U
gamma-BHC (Lindane)	2.6	2.6	U
Heptachlor	2.6	2.6	U
Aldrin	2.6	2.6	U
Heptachlor epoxide	2.6	2.6	U
Endosulfan I	2.6	2.6	U
Dieldrin	5.0	5.0	U
4,4'-DDE	5.0	5.0	U
Endrin	5.0	5.0	U
Endosulfan II	5.0	5.0	U
4,4'-DDD	5.0	5.0	U
Endosulfan sulfate	5.0	5.0	U
4,4'-DDT	5.0	5.0	U
Methoxychlor	26	26	U
Endrin ketone	5.0	2.1	LJ
Endrin aldehyde	5.0	5.0	U
alpha-Chlordane	2.6	2.6	U
gamma-Chlordane	2.6	2.6	U
Toxaphene	260	260	U

Weight (g) : 30.1

%Moisture : 34

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP1	
STATION LOCATION		L-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.7	2.7	U
beta-BHC	2.7	2.7	U
delta-BHC	2.7	2.7	U
gamma-BHC (Lindane)	2.7	2.7	U
Heptachlor	2.7	2.7	U
Aldrin	2.7	2.7	U
Heptachlor epoxide	2.7	2.7	U
Endosulfan I	2.7	2.7	U
Dieldrin	5.3	5.3	U
4,4'-DDE	5.3	5.3	U
Endrin	5.3	5.3	U
Endosulfan II	5.3	5.3	U
4,4'-DDD	5.3	5.3	U
Endosulfan sulfate	5.3	5.3	U
4,4'-DDT	5.3	5.3	U
Methoxychlor	27	27	U
Endrin ketone	5.3	5.3	U
Endrin aldehyde	5.3	5.3	U
alpha-Chlordane	2.7	2.7	U
gamma-Chlordane	2.7	2.7	U
Toxaphene	270	270	U

Weight (g) : 30.3

%Moisture : 38

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP2	
STATION LOCATION		G-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.8	2.8	U
beta-BHC	2.8	2.8	U
delta-BHC	2.8	2.8	U
gamma-BHC (Lindane)	2.8	2.8	U
Heptachlor	2.8	2.8	U
Aldrin	2.8	2.8	U
Heptachlor epoxide	2.8	2.8	U
Endosulfan I	2.8	2.8	U
Dieldrin	5.4	5.4	U
4,4'-DDE	5.4	5.4	U
Endrin	5.4	5.4	U
Endosulfan II	5.4	5.4	U
4,4'-DDD	5.4	5.4	U
Endosulfan sulfate	5.4	5.4	U
4,4'-DDT	5.4	5.4	U
Methoxychlor	28	28	U
Endrin ketone	5.4	5.4	U
Endrin aldehyde	5.4	5.4	U
alpha-Chlordane	2.8	2.8	U
gamma-Chlordane	2.8	2.8	U
Toxaphene	280	280	U

Weight (g) : 29.9

%Moisture : 39

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP3	
STATION LOCATION		F-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.8	2.8	U
beta-BHC	2.8	2.8	U
delta-BHC	2.8	2.8	U
gamma-BHC (Lindane)	2.8	2.8	U
Heptachlor	2.8	2.8	U
Aldrin	2.8	2.8	U
Heptachlor epoxide	2.8	2.8	U
Endosulfan I	2.8	2.8	U
Dieldrin	5.5	5.5	U
4,4'-DDE	5.5	5.5	U
Endrin	5.5	5.5	U
Endosulfan II	5.5	5.5	U
4,4'-DDD	5.5	5.5	U
Endosulfan sulfate	5.5	5.5	U
4,4'-DDT	5.5	5.5	U
Methoxychlor	28	28	U
Endrin ketone	5.5	5.5	U
Endrin aldehyde	5.5	5.5	U
alpha-Chlordane	2.8	2.8	U
gamma-Chlordane	2.8	2.8	U
Toxaphene	280	280	U

Weight (g) : 30.1
%Moisture : 40
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP4	
STATION LOCATION		F-SD5-1 D	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.7	2.7	U
beta-BHC	2.7	2.7	U
delta-BHC	2.7	2.7	U
gamma-BHC (Lindane)	2.7	2.7	U
Heptachlor	2.7	2.7	U
Aldrin	2.7	2.7	U
Heptachlor epoxide	2.7	2.7	U
Endosulfan I	2.7	2.7	U
Dieldrin	5.2	5.2	U
4,4'-DDE	5.2	5.2	U
Endrin	5.2	5.2	U
Endosulfan II	5.2	5.2	U
4,4'-DDD	5.2	5.2	U
Endosulfan sulfate	5.2	5.2	U
4,4'-DDT	5.2	5.2	U
Methoxychlor	27	27	U
Endrin ketone	5.2	5.2	U
Endrin aldehyde	5.2	5.2	U
alpha-Chlordane	2.7	2.7	U
gamma-Chlordane	2.7	2.7	U
Toxaphene	270	270	U

Weight (g) : 30.3

%Moisture : 37

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP5	
STATION LOCATION		P-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.5	2.5	U
beta-BHC	2.5	2.5	U
delta-BHC	2.5	2.5	U
gamma-BHC (Lindane)	2.5	2.5	U
Heptachlor	2.5	2.5	U
Aldrin	2.5	2.5	U
Heptachlor epoxide	2.5	2.5	U
Endosulfan I	2.5	2.5	U
Dieldrin	4.9	4.9	U
4,4'-DDE	4.9	4.9	U
Endrin	4.9	4.9	U
Endosulfan II	4.9	4.9	U
4,4'-DDD	4.9	4.9	U
Endosulfan sulfate	4.9	4.9	U
4,4'-DDT	4.9	4.9	U
Methoxychlor	25	25	U
Endrin ketone	4.9	4.9	U
Endrin aldehyde	4.9	4.9	U
alpha-Chlordane	2.5	2.5	U
gamma-Chlordane	2.5	2.5	U
Toxaphene	250	250	U

Weight (g) : 30.2

%Moisture : 33

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP6	
STATION LOCATION		D-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	3.3	3.3	U
beta-BHC	3.3	3.3	U
delta-BHC	3.3	3.3	U
gamma-BHC (Lindane)	3.3	3.3	U
Heptachlor	3.3	3.3	U
Aldrin	3.3	3.3	U
Heptachlor epoxide	3.3	3.3	U
Endosulfan I	3.3	3.3	U
Dieldrin	6.4	6.4	U
4,4'-DDE	6.4	6.4	U
Endrin	6.4	6.4	U
Endosulfan II	6.4	6.4	U
4,4'-DDD	6.4	6.4	U
Endosulfan sulfate	6.4	6.4	U
4,4'-DDT	6.4	6.4	U
Methoxychlor	33	33	U
Endrin ketone	6.4	6.4	U
Endrin aldehyde	6.4	6.4	U
alpha-Chlordane	3.3	3.3	U
gamma-Chlordane	3.3	3.3	U
Toxaphene	330	330	U

Weight (g) : 30.4
%Moisture : 49
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP7	
STATION LOCATION		C-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	3.1	3.1	U
beta-BHC	3.1	3.1	U
delta-BHC	3.1	3.1	U
gamma-BHC (Lindane)	3.1	3.1	U
Heptachlor	3.1	3.1	U
Aldrin	3.1	3.1	U
Heptachlor epoxide	3.1	3.1	U
Endosulfan I	3.1	3.1	U
Dieldrin	6.1	6.1	U
4,4'-DDE	6.1	6.1	U
Endrin	6.1	6.1	U
Endosulfan II	6.1	6.1	U
4,4'-DDD	6.1	6.1	U
Endosulfan sulfate	6.1	6.1	U
4,4'-DDT	6.1	6.1	U
Methoxychlor	31	31	U
Endrin ketone	6.1	6.1	U
Endrin aldehyde	6.1	6.1	U
alpha-Chlordane	3.1	3.1	U
gamma-Chlordane	3.1	3.1	U
Toxaphene	310	310	U

Weight (g) : 30.3

%Moisture : 46

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP8	
STATION LOCATION		B-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	3.0	3.0	U
beta-BHC	3.0	3.0	U
delta-BHC	3.0	3.0	U
gamma-BHC (Lindane)	3.0	3.0	U
Heptachlor	3.0	3.0	U
Aldrin	3.0	3.0	U
Heptachlor epoxide	3.0	3.0	U
Endosulfan I	3.0	3.0	U
Dieldrin	5.9	5.9	U
4,4'-DDE	5.9	5.9	U
Endrin	5.9	5.9	U
Endosulfan II	5.9	5.9	U
4,4'-DDD	5.9	5.9	U
Endosulfan sulfate	5.9	5.9	U
4,4'-DDT	5.9	5.9	U
Methoxychlor	30	30	U
Endrin ketone	5.9	5.9	U
Endrin aldehyde	5.9	5.9	U
alpha-Chlordane	3.0	3.0	U
gamma-Chlordane	3.0	3.0	U
Toxaphene	300	300	U

Weight (g) : 30.1
%Moisture : 44
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP9	
STATION LOCATION		K-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.8	2.8	U
beta-BHC	2.8	2.8	U
delta-BHC	2.8	2.8	U
gamma-BHC (Lindane)	2.8	2.8	U
Heptachlor	2.8	2.8	U
Aldrin	2.8	2.8	U
Heptachlor epoxide	2.8	2.8	U
Endosulfan I	2.8	2.8	U
Dieldrin	5.5	5.5	U
4,4'-DDE	5.5	5.5	U
Endrin	5.5	5.5	U
Endosulfan II	5.5	5.5	U
4,4'-DDD	5.5	5.5	U
Endosulfan sulfate	5.5	5.5	U
4,4'-DDT	5.5	5.5	U
Methoxychlor	28	28	U
Endrin ketone	5.5	5.5	U
Endrin aldehyde	5.5	5.5	U
alpha-Chlordane	2.8	2.8	U
gamma-Chlordane	2.8	2.8	U
Toxaphene	280	280	U

Weight (g) : 30.0

%Moisture : 40

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ0	
STATION LOCATION		Q-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	3.8	3.8	U
beta-BHC	3.8	3.8	U
delta-BHC	3.8	3.8	U
gamma-BHC (Lindane)	3.8	3.8	U
Heptachlor	3.8	3.8	U
Aldrin	3.8	3.8	U
Heptachlor epoxide	3.8	3.8	U
Endosulfan I	3.8	3.8	U
Dieldrin	7.3	7.3	U
4,4'-DDE	7.3	7.3	U
Endrin	7.3	7.3	U
Endosulfan II	7.3	7.3	U
4,4'-DDD	7.3	7.3	U
Endosulfan sulfate	7.3	7.3	U
4,4'-DDT	7.3	7.3	U
Methoxychlor	38	38	U
Endrin ketone	7.3	7.3	U
Endrin aldehyde	7.3	7.3	U
alpha-Chlordane	3.8	3.8	U
gamma-Chlordane	3.8	3.8	U
Toxaphene	380	380	U

Weight (g) : 30.1
%Moisture : 55
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ1	
STATION LOCATION		M-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	4.2	4.2	U
beta-BHC	4.2	4.2	U
delta-BHC	4.2	4.2	U
gamma-BHC (Lindane)	4.2	4.2	U
Heptachlor	4.2	4.2	U
Aldrin	4.2	4.2	U
Heptachlor epoxide	4.2	4.2	U
Endosulfan I	4.2	4.2	U
Dieldrin	8.1	8.1	U
4,4'-DDE	8.1	8.1	U
Endrin	8.1	8.1	U
Endosulfan II	8.1	8.1	U
4,4'-DDD	8.1	8.1	U
Endosulfan sulfate	8.1	8.1	U
4,4'-DDT	8.1	8.1	U
Methoxychlor	42	42	U
Endrin ketone	8.1	8.1	U
Endrin aldehyde	8.1	8.1	U
alpha-Chlordane	4.2	4.2	U
gamma-Chlordane	4.2	4.2	U
Toxaphene	420	420	U

Weight (g) : 29.9

%Moisture : 59

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ2	
STATION LOCATION		O-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.9	2.9	U
beta-BHC	2.9	2.9	U
delta-BHC	2.9	2.9	U
gamma-BHC (Lindane)	2.9	2.9	U
Heptachlor	2.9	2.9	U
Aldrin	2.9	2.9	U
Heptachlor epoxide	2.9	2.9	U
Endosulfan I	2.9	2.9	U
Dieldrin	5.7	5.7	U
4,4'-DDE	5.7	5.7	U
Endrin	5.7	5.7	U
Endosulfan II	5.7	5.7	U
4,4'-DDD	5.7	5.7	U
Endosulfan sulfate	5.7	5.7	U
4,4'-DDT	5.7	5.7	U
Methoxychlor	29	29	U
Endrin ketone	5.7	5.7	U
Endrin aldehyde	5.7	5.7	U
alpha-Chlordane	2.9	2.9	U
gamma-Chlordane	2.9	2.9	U
Toxaphene	290	290	U

Weight (g) : 30.2

%Moisture : 42

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ3	
STATION LOCATION		A-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	3.2	3.2	U
beta-BHC	3.2	3.2	U
delta-BHC	3.2	3.2	U
gamma-BHC (Lindane)	3.2	3.2	U
Heptachlor	3.2	3.2	U
Aldrin	3.2	3.2	U
Heptachlor epoxide	3.2	3.2	U
Endosulfan I	3.2	3.2	U
Dieldrin	6.2	6.2	U
4,4'-DDE	6.2	6.2	U
Endrin	6.2	6.2	U
Endosulfan II	6.2	6.2	U
4,4'-DDD	6.2	6.2	U
Endosulfan sulfate	6.2	6.2	U
4,4'-DDT	6.2	6.2	U
Methoxychlor	32	32	U
Endrin ketone	6.2	6.2	U
Endrin aldehyde	6.2	6.2	U
alpha-Chlordane	3.2	3.2	U
gamma-Chlordane	3.2	3.2	U
Toxaphene	320	320	U

Weight (g) : 30.1

%Moisture : 47

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ4	
STATION LOCATION		A-SD5-1 D	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	3.3	3.3	U
beta-BHC	3.3	3.3	U
delta-BHC	3.3	3.3	U
gamma-BHC (Lindane)	3.3	3.3	U
Heptachlor	3.3	3.3	U
Aldrin	3.3	3.3	U
Heptachlor epoxide	3.3	3.3	U
Endosulfan I	3.3	3.3	U
Dieldrin	6.4	6.4	U
4,4'-DDE	6.4	6.4	U
Endrin	6.4	6.4	U
Endosulfan II	6.4	6.4	U
4,4'-DDD	6.4	6.4	U
Endosulfan sulfate	6.4	6.4	U
4,4'-DDT	6.4	6.4	U
Methoxychlor	33	33	U
Endrin ketone	6.4	6.4	U
Endrin aldehyde	6.4	6.4	U
alpha-Chlordane	3.3	3.3	U
gamma-Chlordane	3.3	3.3	U
Toxaphene	330	330	U

Weight (g) : 30.3

%Moisture : 49

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ5	
STATION LOCATION		E-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.6	2.6	U
beta-BHC	2.6	2.6	U
delta-BHC	2.6	2.6	U
gamma-BHC (Lindane)	2.6	2.6	U
Heptachlor	2.6	2.6	U
Aldrin	2.6	2.6	U
Heptachlor epoxide	2.6	2.6	U
Endosulfan I	2.6	2.6	U
Dieldrin	5.1	5.1	U
4,4'-DDE	5.1	5.1	U
Endrin	5.1	5.1	U
Endosulfan II	5.1	5.1	U
4,4'-DDD	5.1	5.1	U
Endosulfan sulfate	5.1	5.1	U
4,4'-DDT	5.1	5.1	U
Methoxychlor	26	26	U
Endrin ketone	5.1	5.1	U
Endrin aldehyde	5.1	5.1	U
alpha-Chlordane	2.6	2.6	U
gamma-Chlordane	2.6	2.6	U
Toxaphene	260	260	U

Weight (g) : 30.1
%Moisture : 36
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ6	
STATION LOCATION		J-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.7	2.7	U
beta-BHC	2.7	2.7	U
delta-BHC	2.7	2.7	U
gamma-BHC (Lindane)	2.7	2.7	U
Heptachlor	2.7	2.7	U
Aldrin	2.7	2.7	U
Heptachlor epoxide	2.7	2.7	U
Endosulfan I	2.7	2.7	U
Dieldrin	5.2	5.2	U
4,4'-DDE	5.2	5.2	U
Endrin	5.2	5.2	U
Endosulfan II	5.2	5.2	U
4,4'-DDD	5.2	5.2	U
Endosulfan sulfate	5.2	5.2	U
4,4'-DDT	5.2	5.2	U
Methoxychlor	27	27	U
Endrin ketone	5.2	5.2	U
Endrin aldehyde	5.2	5.2	U
alpha-Chlordane	2.7	2.7	U
gamma-Chlordane	2.7	2.7	U
Toxaphene	270	270	U

Weight (g) : 30.3

%Moisture : 37

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ7	
STATION LOCATION		H-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	2.7	2.7	U
beta-BHC	2.7	2.7	U
delta-BHC	2.7	2.7	U
gamma-BHC (Lindane)	2.7	2.7	U
Heptachlor	2.7	2.7	U
Aldrin	2.7	2.7	U
Heptachlor epoxide	2.7	2.7	U
Endosulfan I	2.7	2.7	U
Dieldrin	5.2	5.2	U
4,4'-DDE	5.2	5.2	U
Endrin	5.2	5.2	U
Endosulfan II	5.2	5.2	U
4,4'-DDD	5.2	2.4	LJ
Endosulfan sulfate	5.2	5.2	U
4,4'-DDT	5.2	3.8	LJ
Methoxychlor	27	27	U
Endrin ketone	5.2	5.2	U
Endrin aldehyde	5.2	5.2	U
alpha-Chlordane	2.7	2.7	U
gamma-Chlordane	2.7	2.7	U
Toxaphene	270	270	U

Weight (g) : 30.1

%Moisture : 37

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ8	
STATION LOCATION		R-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	4.4	4.4	U
beta-BHC	4.4	4.4	U
delta-BHC	4.4	4.4	U
gamma-BHC (Lindane)	4.4	4.4	U
Heptachlor	4.4	4.4	U
Aldrin	4.4	4.4	U
Heptachlor epoxide	4.4	4.4	U
Endosulfan I	4.4	4.4	U
Dieldrin	8.6	8.6	U
4,4'-DDE	8.6	8.6	U
Endrin	8.6	8.6	U
Endosulfan II	8.6	8.6	U
4,4'-DDD	8.6	8.6	U
Endosulfan sulfate	8.6	8.6	U
4,4'-DDT	8.6	2.1	LJ
Methoxychlor	44	44	U
Endrin ketone	8.6	8.6	U
Endrin aldehyde	8.6	8.6	U
alpha-Chlordane	4.4	4.4	U
gamma-Chlordane	4.4	4.4	U
Toxaphene	440	440	U

Weight (g) : 30.3
%Moisture : 62
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ9	
STATION LOCATION		S-SD5-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	3.1	3.1	U
beta-BHC	3.1	3.1	U
delta-BHC	3.1	3.1	U
gamma-BHC (Lindane)	3.1	3.1	U
Heptachlor	3.1	3.1	U
Aldrin	3.1	3.1	U
Heptachlor epoxide	3.1	3.1	U
Endosulfan I	3.1	3.1	U
Dieldrin	6.0	6.0	U
4,4'-DDE	6.0	6.0	U
Endrin	6.0	6.0	U
Endosulfan II	6.0	6.0	U
4,4'-DDD	6.0	6.0	U
Endosulfan sulfate	6.0	6.0	U
4,4'-DDT	6.0	6.0	U
Methoxychlor	31	31	U
Endrin ketone	6.0	6.0	U
Endrin aldehyde	6.0	6.0	U
alpha-Chlordane	3.1	3.1	U
gamma-Chlordane	3.1	3.1	U
Toxaphene	310	310	U

Weight (g) : 30.1

%Moisture : 45

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP0	
STATION LOCATION		N-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	33	33	U
Aroclor-1221	6.5	6.5	U
Aroclor-1232	33	33	U
Aroclor-1242	6.5	6.5	U
Aroclor-1248	33	33	U
Aroclor-1254	6.5	6.5	U
Aroclor-1260	33	17	LJ
Aroclor-1262	33	33	U
Aroclor-1268	33	33	U

Weight (g) : 46.1

%Moisture : 34

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP1	
STATION LOCATION		L-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	32	32	U
Aroclor-1221	6.4	6.4	U
Aroclor-1232	32	32	U
Aroclor-1242	6.4	6.4	U
Aroclor-1248	32	32	U
Aroclor-1254	6.4	6.4	U
Aroclor-1260	32	32	U
Aroclor-1262	32	32	U
Aroclor-1268	32	32	U

Weight (g) : 49.9

%Moisture : 38

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP2	
STATION LOCATION		G-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	32	32	U
Aroclor-1221	6.5	6.5	U
Aroclor-1232	32	32	U
Aroclor-1242	6.5	6.5	U
Aroclor-1248	32	32	U
Aroclor-1254	6.5	16	J
Aroclor-1260	32	32	U
Aroclor-1262	32	32	U
Aroclor-1268	32	32	U

Weight (g) : 50.3

%Moisture : 39

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP3	
STATION LOCATION		F-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	33	33	U
Aroclor-1221	6.6	6.6	U
Aroclor-1232	33	33	U
Aroclor-1242	6.6	6.6	U
Aroclor-1248	33	33	U
Aroclor-1254	6.6	6.6	U
Aroclor-1260	33	33	U
Aroclor-1262	33	33	U
Aroclor-1268	33	33	U

Weight (g) : 50.1
 %Moisture : 40
 Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP4	
STATION LOCATION		F-SD5-1 D	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	33	33	U
Aroclor-1221	6.5	6.5	U
Aroclor-1232	33	33	U
Aroclor-1242	6.5	6.5	U
Aroclor-1248	33	33	U
Aroclor-1254	6.5	6.5	U
Aroclor-1260	33	33	U
Aroclor-1262	33	33	U
Aroclor-1268	33	33	U

Weight (g) : 48.1

%Moisture : 37

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP5	
STATION LOCATION		P-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	33	33	U
Aroclor-1221	6.5	6.5	U
Aroclor-1232	33	33	U
Aroclor-1242	6.5	6.5	U
Aroclor-1248	33	33	U
Aroclor-1254	6.5	6.5	U
Aroclor-1260	33	33	U
Aroclor-1262	33	33	U
Aroclor-1268	33	33	U

Weight (g) : 45.2
 %Moisture : 33
 Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP6	
STATION LOCATION		D-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	39	39	U
Aroclor-1221	7.7	7.7	U
Aroclor-1232	39	39	U
Aroclor-1242	7.7	7.7	U
Aroclor-1248	39	39	U
Aroclor-1254	7.7	75	
Aroclor-1260	39	39	U
Aroclor-1262	39	39	U
Aroclor-1268	39	39	U

Weight (g) : 50.3

%Moisture : 49

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP7	
STATION LOCATION		C-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	37	37	U
Aroclor-1221	7.3	7.3	U
Aroclor-1232	37	37	U
Aroclor-1242	7.3	7.3	U
Aroclor-1248	37	37	U
Aroclor-1254	7.3	19	
Aroclor-1260	37	37	U
Aroclor-1262	37	37	U
Aroclor-1268	37	37	U

Weight (g) : 50.1
 %Moisture : 46
 Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XP8	
STATION LOCATION		B-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	35	35	U
Aroclor-1221	7.0	7.0	U
Aroclor-1232	35	35	U
Aroclor-1242	7.0	7.0	U
Aroclor-1248	35	35	U
Aroclor-1254	7.0	7.0	U
Aroclor-1260	35	35	U
Aroclor-1262	35	35	U
Aroclor-1268	35	35	U

Weight (g) : 50.2

%Moisture : 44

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XP9	
STATION LOCATION		K-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	33	33	U
Aroclor-1221	6.6	6.6	U
Aroclor-1232	33	33	U
Aroclor-1242	6.6	6.6	U
Aroclor-1248	33	33	U
Aroclor-1254	6.6	5.9	LJ
Aroclor-1260	33	33	U
Aroclor-1262	33	33	U
Aroclor-1268	33	33	U

Weight (g) : 50.1
 %Moisture : 40
 Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ0	
STATION LOCATION		Q-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	43	43	U
Aroclor-1221	8.6	8.6	U
Aroclor-1232	43	43	U
Aroclor-1242	8.6	8.6	U
Aroclor-1248	43	43	U
Aroclor-1254	8.6	20	
Aroclor-1260	43	43	U
Aroclor-1262	43	43	U
Aroclor-1268	43	43	U

Weight (g) : 51.1

%Moisture : 55

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ1	
STATION LOCATION		M-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	47	47	U
Aroclor-1221	9.4	9.4	U
Aroclor-1232	47	47	U
Aroclor-1242	9.4	9.4	U
Aroclor-1248	47	47	U
Aroclor-1254	9.4	26	J
Aroclor-1260	47	47	U
Aroclor-1262	47	47	U
Aroclor-1268	47	47	U

Weight (g) : 51.3
 %Moisture : 59
 Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ2	
STATION LOCATION		O-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	34	34	U
Aroclor-1221	6.8	6.8	U
Aroclor-1232	34	34	U
Aroclor-1242	6.8	29	J
Aroclor-1248	34	34	U
Aroclor-1254	6.8	26	
Aroclor-1260	34	34	U
Aroclor-1262	34	34	U
Aroclor-1268	34	34	U

Weight (g) : 50.0

%Moisture : 42

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ3	
STATION LOCATION		A-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	37	37	U
Aroclor-1221	7.4	7.4	U
Aroclor-1232	37	37	U
Aroclor-1242	7.4	32	J
Aroclor-1248	37	37	U
Aroclor-1254	7.4	12	J
Aroclor-1260	37	37	U
Aroclor-1262	37	37	U
Aroclor-1268	37	37	U

Weight (g) : 50.3

%Moisture : 47

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ4	
STATION LOCATION		A-SD5-1 D	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	39	39	U
Aroclor-1221	7.7	7.7	U
Aroclor-1232	39	39	U
Aroclor-1242	7.7	42	
Aroclor-1248	39	39	U
Aroclor-1254	7.7	15	
Aroclor-1260	39	39	U
Aroclor-1262	39	39	U
Aroclor-1268	39	39	U

Weight (g) : 50.1

%Moisture : 49

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ5	
STATION LOCATION		E-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	32	32	U
Aroclor-1221	6.4	6.4	U
Aroclor-1232	32	32	U
Aroclor-1242	6.4	6.4	U
Aroclor-1248	32	32	U
Aroclor-1254	6.4	7.5	J
Aroclor-1260	32	32	U
Aroclor-1262	32	32	U
Aroclor-1268	32	32	U

Weight (g) : 48.1
%Moisture : 36
Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ6	
STATION LOCATION		J-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	32	32	U
Aroclor-1221	6.5	6.5	U
Aroclor-1232	32	32	U
Aroclor-1242	6.5	6.5	U
Aroclor-1248	32	32	U
Aroclor-1254	6.5	4.1	LJ
Aroclor-1260	32	32	U
Aroclor-1262	32	32	U
Aroclor-1268	32	32	U

Weight (g) : 48.4
 %Moisture : 37
 Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ7	
STATION LOCATION		H-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	33	33	U
Aroclor-1221	6.5	6.5	U
Aroclor-1232	33	33	U
Aroclor-1242	6.5	46	J
Aroclor-1248	33	33	U
Aroclor-1254	6.5	51	
Aroclor-1260	33	33	U
Aroclor-1262	33	33	U
Aroclor-1268	33	33	U

Weight (g) : 48.1
 %Moisture : 37
 Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XP0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Soil

Units : ug/Kg

EPA SAMPLE No.		F4XQ8	
STATION LOCATION		R-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	52	52	U
Aroclor-1221	10	10	U
Aroclor-1232	52	52	U
Aroclor-1242	10	10	U
Aroclor-1248	52	52	U
Aroclor-1254	10	15	J
Aroclor-1260	52	52	U
Aroclor-1262	52	52	U
Aroclor-1268	52	52	U

Weight (g) : 50.3

%Moisture : 62

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040 SDG : F4XP0 Reviewer : Y. Hsieh
 Laboratory : KAP Matrix : Soil Units : ug/Kg

EPA SAMPLE No.		F4XQ9	
STATION LOCATION		S-SD5-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	36	36	U
Aroclor-1221	7.2	7.2	U
Aroclor-1232	36	36	U
Aroclor-1242	7.2	23	J
Aroclor-1248	36	36	U
Aroclor-1254	7.2	11	J
Aroclor-1260	36	36	U
Aroclor-1262	36	36	U
Aroclor-1268	36	36	U

Weight (g) : 50.1
 %Moisture : 45
 Dilution Factor : 1

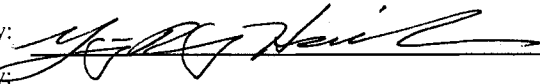
Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.
 Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No. 42040 SDG No. F4XP0 SDG Nos. To Follow Mod. Ref No. 2207.0 Date Rec 12/30/11

EPA Lab ID: <u>KAP</u> Lab Location: <u>The Woodlands, TX</u> Region: <u>6</u> Audit No.: <u>42040/F4XP0</u> Re_Submitted CSF? Yes No <u>X</u> Box No(s): <u>1</u> COMMENTS:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">ORIGINALS</th> <th style="text-align: center;">YES</th> <th style="text-align: center;">NO</th> <th style="text-align: center;">N/A</th> </tr> <tr> <td colspan="4">CUSTODY SEALS</td> </tr> <tr> <td>1. Present on package?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>2. Intact upon receipt?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td colspan="4">FORM DC-2</td> </tr> <tr> <td>3. Numbering scheme accurate?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>4. Are enclosed documents listed?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>5. Are listed documents enclosed?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td colspan="4">FORM DC-1</td> </tr> <tr> <td>6. Present?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>7. Complete?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>8. Accurate?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td colspan="4">TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)</td> </tr> <tr> <td>9. Signed?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>10. Dated?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td colspan="4">AIRBILLS/AIRBILL STICKER</td> </tr> <tr> <td>11. Present?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>12. Signed?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>13. Dated?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td colspan="4">SAMPLE TAGS</td> </tr> <tr> <td>14. Does DC-1 list tags as being included?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>15. Present?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td colspan="4">OTHER DOCUMENTS</td> </tr> <tr> <td>16. Complete?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>17. Legible?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>18. Original?</td> <td></td> <td style="text-align: center;">X</td> <td></td> </tr> <tr> <td>18a. If "NO", does the copy indicate where original documents are located?</td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> </table>	ORIGINALS	YES	NO	N/A	CUSTODY SEALS				1. Present on package?	X			2. Intact upon receipt?	X			FORM DC-2				3. Numbering scheme accurate?	X			4. Are enclosed documents listed?	X			5. Are listed documents enclosed?	X			FORM DC-1				6. Present?	X			7. Complete?	X			8. Accurate?	X			TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)				9. Signed?	X			10. Dated?	X			AIRBILLS/AIRBILL STICKER				11. Present?	X			12. Signed?	X			13. Dated?	X			SAMPLE TAGS				14. Does DC-1 list tags as being included?	X			15. Present?	X			OTHER DOCUMENTS				16. Complete?	X			17. Legible?	X			18. Original?		X		18a. If "NO", does the copy indicate where original documents are located?	X		
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Over for additional comments.

Audited by:  Audited by: _____ <div style="text-align: center;">Signature</div>	Ying-Ping Hsieh / ESAT Data Reviewer _____ <div style="text-align: center;">Printed Name/Title</div>	Date <u>2/3/12</u> Date _____
--	--	----------------------------------

DC-2__



USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No:	42040	R
DAS No:		

Region: 6	Date Shipped: 12/6/2011	Chain of Custody Record	Sampler Signature:	
Project Code: EP-W-06-004	Carrier Name: FedEx		Relinquished By (Date / Time)	Received By (Date / Time)
Account Code: TXD099801102	Airbill: 7954 7732 7083		1 <i>Shel</i> 12/6/11 1900	
CERCLIS ID: TXD099801102	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065		2	
Spill ID:			3	
Site Name/State: State Marine of Port Arthur Superfund Site/		4		
Project Leader: STAN WALLACE				
Action: Five Year Review Sampling				
Sampling Co: EA Engineering, Science, & Technology				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
F4XP0	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-499101 (Ice Only), 6-499102 (Ice Only) (2)	N-SD5-1	S: 12/5/2011	10:35		--
F4XP1	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-499079 (Ice Only), 6-499080 (Ice Only) (2)	L-SD5-1	S: 12/5/2011	11:30		--
F4XP2	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-445851 (Ice Only), 6-445852 (Ice Only), 6-445853 (Ice Only), 6-445854 (Ice Only) (4)	G-SD5-1	S: 12/5/2011	12:05		--

Page 113 of 117

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC: F4XP2	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: SVSIM/P/A = SVOA/SVOASIM + Pest + ARO (MA#2207.0)	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 6-574702950-120611-0002

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to Sample Management Office, 15000 Conference Center Drive, Chantilly, VA. 20151-3819 Phone 703/818-4200; Fax 703/818-4602

REGION COPY



USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 42040

DAS No:

R

Region: 6	Date Shipped: 12/6/2011	Chain of Custody Record	Sampler Signature:
Project Code: EP-W-06-004	Carrier Name: FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code: U.S.	Airbill: 7978 07ZZ 7903	1 12/6/11 1900	
CERCLIS ID: TXD099801102	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065	2	
Spill ID:		3	
Site Name/State: State Marine of Port Arthur Superfund Site/		4	
Project Leader: STAN WALLACE			
Action: Five Year Review Sampling			
Sampling Co: EA Engineering, Science, & Technology			

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
F4XP3	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-499074 (Ice Only), 6-499075 (Ice Only) (2)	F-SD5-1	S: 12/5/2011	15:05	--	
F4XP4	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-499037 (Ice Only), 6-499038 (Ice Only) (2)	F-SD5-1 D	S: 12/5/2011	15:05		Field Duplicate
F4XP5	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-445855 (Ice Only), 6-445856 (Ice Only) (2)	P-SD5-1	S: 12/5/2011	16:30	--	
F4XP6	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-445857 (Ice Only), 6-445858 (Ice Only) (2)	D-SD5-1	S: 12/6/2011	10:15	--	
F4XQ5	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-445875 (Ice Only), 6-445876 (Ice Only) (2)	E-SD5-1	S: 12/6/2011	9:30	--	

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: SVSIM/P/A = SVOA/SVOASIM + Pest + ARO (MA#2207.0)	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 6-574702950-120611-0006

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Page 114 of 117

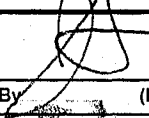
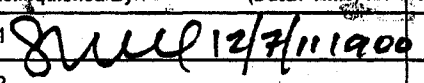


USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

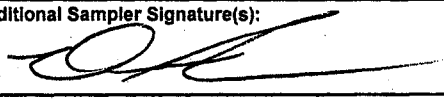
Case No: 42040

DAS No:

R

Region: 6	Date Shipped: 12/7/2011	Chain of Custody Record	Sampler Signature: 
Project Code: EP-W-06-004	Carrier Name: FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code: 16	Airbill: 7954 8232 1669	1  12/7/11 1900	
CERCLIS ID: TXD099801102	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065	2	
Spill ID:		3	
Site Name/State: State Marine of Port Arthur Superfund Site/		4	
Project Leader: STAN WALLACE			
Action: Five Year Review Sampling			
Sampling Co: EA Engineering, Science, & Technology			

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
F4XP7	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-445859 (Ice Only), 6-445860 (Ice Only) (2)	C-SD5-1	S: 12/6/2011 11:45		--
F4XP8	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-445861 (Ice Only), 6-445862 (Ice Only) (2)	B-SD5-1	S: 12/6/2011 12:30		--
F4XP9	Sediment/ DUANE THOMAS	L/G	SVSIM/P/A (21)	6-445863 (Ice Only), 6-445864 (Ice Only) (2)	K-SD5-1	S: 12/6/2011 15:00		--
F4XQ6	Sediment/ JASON STROUP	L/G	SVSIM/P/A (21)	6-445877 (Ice Only), 6-445878 (Ice Only) (2)	J-SD5-1	S: 12/6/2011 8:45		--

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): 	Chain of Custody Seal Number:
Analysis Key: SVSIM/P/A = SVOA/SVOASIM + Pest + ARO (MA#2207.0)	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 6-574702950-120711-0004

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Page 115 of 117




USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 42040

DAS No:

R

Region: 6	Date Shipped: 12/8/2011	Chain of Custody Record	Sampler Signature: 	
Project Code: EP-W-06-004	Carrier Name: FedEx		Relinquished By (Date / Time)	Received By (Date / Time)
Account Code: TXD099801102	Airbill: 7954 8809 5307		8 Will 12/8/11 1400	
Spill ID:	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065		2	
Site Name/State: State Marine of Port Arthur Superfund Site/			3	
Project Leader: STAN WALLACE		4		
Action: Five Year Review Sampling				
Sampling Co: EA Engineering, Science, & Technology				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
F4XQ1	Sediment/ DUANE THOMAS	L/G	SVSIM/P/A (21)	6-445867 (Ice Only), 6-445868 (Ice Only) (2)	M-SD5-1	S: 12/7/2011	9:45		--
F4XQ3	Sediment/ DUANE THOMAS	L/G	SVSIM/P/A (21)	6-445871 (Ice Only), 6-445872 (Ice Only) (2)	A-SD5-1	S: 12/7/2011	11:45		--
F4XQ4	Sediment/ DUANE THOMAS	L/G	SVSIM/P/A (21)	6-445873 (Ice Only), 6-445874 (Ice Only) (2)	A-SD5-1 D	S: 12/7/2011	11:45		Field Duplicate
F4XQ7	Sediment/ DUANE THOMAS	L/G	SVSIM/P/A (21)	6-445879 (Ice Only), 6-445880 (Ice Only) (2)	H-SD5-1	S: 12/7/2011	14:35		--

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: SVSIM/P/A = SVOA/SVOASIM + Pest + ARO (MA#2207.0)	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 6-574702950-120811-0006

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 42040

DAS No:

R

Region: 6	Date Shipped: 12/8/2011	Chain of Custody Record	Sampler Signature:	
Project Code: EP-W-06-004	Carrier Name: FedEx		Relinquished By (Date / Time)	Received By (Date / Time)
Account Code: TXD099801102	Airbill: 7954 8837 7410		1 <i>Wall</i> 12/8/11/400	
Spill ID:	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065		2	
Site Name/State: State Marine of Port Arthur Superfund Site/ Project Leader: STAN WALLACE Action: Five Year Review Sampling Sampling Co: EA Engineering, Science, & Technology			3	
		4		

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
F4XQ0	Sediment/ DUANE	L/G	SVSIM/P/A (21)	6-445865 (Ice Only), 6-445866 (Ice Only) (2)	Q-SD5-1	S: 12/7/2011	9:00		--
F4XQ2	THOMAS Sediment/ DUANE	L/G	SVSIM/P/A (21)	6-445869 (Ice Only), 6-445870 (Ice Only) (2)	O-SD5-1	S: 12/7/2011	10:30		--
F4XQ8	THOMAS Sediment/ DUANE	L/G	SVSIM/P/A (21)	6-445881 (Ice Only), 6-445882 (Ice Only) (2)	R-SD5-1	S: 12/7/2011	15:10		--
F4XQ9	THOMAS Sediment/ DUANE	L/G	SVSIM/P/A (21)	6-445883 (Ice Only), 6-445884 (Ice Only) (2)	S-SD5-1	S: 12/7/2011	15:35		--
	THOMAS								

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: SVSIM/P/A = SVOA/SVOASIM + Pest + ARO (MA#2207.0)	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 6-574702950-120811-0008

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**REGION 6
HOUSTON BRANCH
10625 FALLSTONE RD.
HOUSTON, TEXAS 77099**

February 9, 2012

MEMORANDUM

SUBJECT: Contract Laboratory Program Data Review

FROM: Raymond Flores, Alternate ESAT Regional Project Officer
Environmental Services Branch (6MD-H)

*NGANNON
FOR R.F.*

TO: Rafael Casanova, Superfund Project Manager (6SF-RA)

Site: STATE MARINE OF PORT ARTHUR

Case#: 42040

SDG#: F4XR0

The EPA Region 6 Environmental Services Branch ESAT data review team has completed a review of the submitted Contract Laboratory Program (CLP) data package for the referenced site. The samples analyzed and reviewed are detailed in the attached Regional data review report.

The data package is acceptable for regional use. Problems, if any, are listed in the report narrative.

If you have any questions regarding the data review report, please contact me at (281) 983-2139.

ENVIRONMENTAL SERVICES ASSISTANCE TEAM

ESAT Region 6
10625 Fallstone Road
Houston, TX 77099

Alion Science and Technology

MEMORANDUM

DATE: February 9, 2012
TO: Marvelyn Humphrey, ESAT PO, Region 6 EPA
FROM: Ying-Ping Hsieh, Data Reviewer, ESAT *YH*
THRU: Dominic G. Jarecki, ESAT Program Manager, ESAT *063*
SUBJECT: CLP Data Review

Contract No.:	EP-W-06-030
TO No.:	024
Task/Sub-Task:	2-11
ESAT Doc. No.:	A024-211-0157
TDF No.:	6-12-104A
ESAT File No.:	O-0775

Attached is the data review summary for Case # 42040
SDG # F4XR0
Site State Marine of Port Arthur

COMMENTS:

I. LEVEL OF DATA REVIEW

Modified CADRE Review was performed for this data package.

II. CONTRACTUAL ASSESSMENT OF THE DATA PACKAGE

The CCS found the data package contractually compliant.

III. TECHNICAL USABILITY ASSESSMENT OF THE DATA PACKAGE

All results are acceptable.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION 6
 HOUSTON BRANCH
 10625 FALLSTONE ROAD
 HOUSTON, TEXAS 77099
 ORGANIC REGIONAL DATA ASSESSMENT

CASE NO.	42040	SITE	State Marine of Port Arthur
LABORATORY	KAP	NO. OF SAMPLES	3
CONTRACT#	EP-W-11-031	MATRIX	Water
SDG#	F4XR0	REVIEWER (IF NOT ESB)	ESAT
SOW#	SOM01.2/MA 2207.0	REVIEWER'S NAME	Ying-Ping Hsieh
SF#	303DD2BX	COMPLETION DATE	February 9, 2012

SAMPLE NO.	F4XR0				
	F4XR1				
	F4XR2				

DATA ASSESSMENT SUMMARY

	BNA	BNA SIM	PEST	ARO
1. HOLDING TIMES	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
2. GC/MS TUNE/INSTR. PERFORM.	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
3. CALIBRATIONS	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
4. BLANKS	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
5. DMC/SURROGATES	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
6. MATRIX SPIKE/DUPLICATE/LCS	<u>N/A</u>	<u>N/A</u>	<u>O</u>	<u>O</u>
7. OTHER QC	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
8. INTERNAL STANDARDS	<u>O</u>	<u>O</u>	<u>N/A</u>	<u>N/A</u>
9. COMPOUND ID/QUANTITATION	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
10. PERFORMANCE/COMPLETENESS	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>
11. OVERALL ASSESSMENT	<u>O</u>	<u>O</u>	<u>O</u>	<u>O</u>

O = Data had no problems.
 M = Data qualified because of major or minor problems.
 Z = Data unacceptable.
 NA = Not applicable.

ACTION ITEMS:

AREA OF CONCERN:

**COMMENTS/CLARIFICATIONS
REGION 6 CLP QA REVIEW**

CASE 42040 **SDG** F4XR0 **SITE** State Marine of Port Arthur **LAB** KAP

COMMENTS: This SDG consisted of three rinsate samples for BNA, BNA-SIM, PEST, and ARO analyses following CLP SOW SOM01.2. The samples were also subject to Modified Analysis Request 2207.0 (MA), which requested lower QLs for Aroclor-1221, Aroclor-1242, and Aroclor-1254; and an LCS spiked with Aroclor-1242 at 2X the MA CRQL.

Although both the full scan and SIM analysis results were available for each BNA sample, the SIM results were designated for use only for pentachlorophenol. The laboratory also lowered the low point standard concentration for Aroclor-1221, Aroclor-1242, and Aroclor-1254 to achieve the MA requirements. The target compounds of concern are pentachlorophenol, 3,3'-dichlorobenzidine, and Aroclor-1242; and none of them was detected in these rinsate samples.

Modified CADRE Review was performed for this package as requested by the Region. For this review option, the CCS and CADRE primarily determine the laboratory contractual compliance and the technical usability of the sample results, respectively. The reviewer performs supplemental hardcopy forms checking and applies Region 6 guidelines, where necessary, to account for known limitations of the electronic review process. Therefore, the reviewer's final assessments may deviate from those found in the CADRE report. The CADRE narrative for the SDG is attached to this report as an addendum for additional information.

DATA ASSESSMENT: There was no QC problem that affected data usability.

OVERALL ASSESSMENT: All results are acceptable. ESAT's final data qualifiers in the DST indicate the technical usability of all reported sample results. An Evidence Audit was conducted for the CSF, and the audit results were reported on the Evidence Inventory Checklist. The DST included in this report is the final version.

ORGANIC ACRONYMS

%D	Percent Difference
%RSD	Percent Relative Standard Deviation
ARO	Aroclors
BFB	4-Bromofluorobenzene
BNA	Base/Neutral and Acid
CADRE	Computer-Aided Data Review and Evaluation
CCS	Contract Compliance Screening
CCV	Continuing Calibration Verification
CF	Calibration Factor
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenylphosphine
DMC	Deuterated Monitoring Compound
DST	Data Summary Table
GC/ECD	Gas Chromatograph/Electron Capture Detector
GC/MS	Gas Chromatograph/Mass Spectrometer
GPC	Gel Permeation Chromatography
IC	Initial Calibration
INDA (B, C)	Individual Standard Mixture A (or B or C)
IS	Internal Standard
LCS	Laboratory Control Sample
LMVOA	Low/Medium Volatile Organic Analysis
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NFG	National Functional Guidelines
OTR/COC	Organic Traffic Report/Chain of Custody
PAH	Polynuclear Aromatic Hydrocarbon
PE	Performance Evaluation
PEM	Performance Evaluation Mixture
PEST	Pesticides
QA	Quality Assurance
QC	Quality Control
QL	Quantitation Limit
RIC	Reconstructed Ion Chromatogram
RPD	Relative Percent Difference
RRF	Relative Response Factor
RRT	Relative Retention Time
RSCC	Regional Sample Control Center
RT	Retention Time
SDG	Sample Delivery Group
SDMC	Semivolatile Deuterated Monitoring Compound
SIM	Selected Ion Monitoring
SMO	Sample Management Office
SOW	Statement of Work
SQL	Sample Quantitation Limit
SVOA	Semivolatile Organic Analysis
TCL	Target Compound List
TCX	Tetrachloro-m-xylene
TIC	Tentatively Identified Compound
TVOA	Trace Volatile Organic Analysis
VDMC	Volatile Deuterated Monitoring Compound
VOA	Volatile Organic Analysis

ORGANIC DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the ESAT-Region 6 qualifiers assigned to results in the Data Summary Table.

- U** Not detected at reported quantitation limit.
- N** Identification is tentative.
- J** Estimated value.
- L** Reported concentration is below the CRQL.
- M** Reported concentration should be used as a raised quantitation limit because of interferences and/or laboratory contamination.
- R** Unusable.
- ^** High biased. Actual concentration may be lower than the concentration reported.
- ✓** Low biased. Actual concentration may be higher than the concentration reported.
- F+** A false positive exists.
- F-** A false negative exists.
- UJ** Estimated quantitation limit.
- T** Identification is questionable because of absence of other commonly coexisting pesticides.
- C** Identification of pesticide or aroclor has been confirmed by Gas Chromatography/Mass Spectrometer (GC/MS).
- X** Identification of pesticide or aroclor could not be confirmed by GC/MS when attempted.
- *** Result not recommended for use because of associated QA/QC performance inferior to that from other analysis.

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR0	
STATION LOCATION		ER-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	5.0	5.0	U
Phenol	5.0	5.0	U
Bis(2-chloroethyl)ether	5.0	5.0	U
2-Chlorophenol	5.0	5.0	U
2-Methylphenol	5.0	5.0	U
2,2'-Oxybis(1-chloropropane)	5.0	5.0	U
Acetophenone	5.0	5.0	U
4-Methylphenol	5.0	5.0	U
N-Nitroso-di-n-propylamine	5.0	5.0	U
Hexachloroethane	5.0	5.0	U
Nitrobenzene	5.0	5.0	U
Isophorone	5.0	5.0	U
2-Nitrophenol	5.0	5.0	U
2,4-Dimethylphenol	5.0	5.0	U
Bis(2-chloroethoxy)methane	5.0	5.0	U
2,4-Dichlorophenol	5.0	5.0	U
Naphthalene	5.0	5.0	U
4-Chloroaniline	5.0	5.0	U
Hexachlorobutadiene	5.0	5.0	U
Caprolactam	5.0	5.0	U
4-Chloro-3-methylphenol	5.0	5.0	U
2-Methylnaphthalene	5.0	5.0	U
Hexachlorocyclopentadiene	5.0	5.0	U
2,4,6-Trichlorophenol	5.0	5.0	U
2,4,5-Trichlorophenol	5.0	5.0	U
1,1'-Biphenyl	5.0	5.0	U
2-Chloronaphthalene	5.0	5.0	U
2-Nitroaniline	10	10	U
Dimethylphthalate	5.0	5.0	U
2,6-Dinitrotoluene	5.0	5.0	U
Acenaphthylene	5.0	5.0	U
3-Nitroaniline	10	10	U
Acenaphthene	5.0	5.0	U
2,4-Dinitrophenol	10	10	U
4-Nitrophenol	10	10	U
Dibenzofuran	5.0	5.0	U
2,4-Dinitrotoluene	5.0	5.0	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR0	
STATION LOCATION		ER-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	5.0	5.0	U
Fluorene	5.0	5.0	U
4-Chlorophenyl-phenylether	5.0	5.0	U
4-Nitroaniline	10	10	U
4,6-Dinitro-2-methylphenol	10	10	U
N-Nitrosodiphenylamine	5.0	5.0	U
1,2,4,5-Tetrachlorobenzene	5.0	5.0	U
4-Bromophenyl-phenylether	5.0	5.0	U
Hexachlorobenzene	5.0	5.0	U
Atrazine	5.0	5.0	U
Pentachlorophenol	10	10	U *
Phenanthrene	5.0	5.0	U
Anthracene	5.0	5.0	U
Carbazole	5.0	5.0	U
Di-n-butylphthalate	5.0	5.0	U
Fluoranthene	5.0	5.0	U
Pyrene	5.0	5.0	U
Butylbenzylphthalate	5.0	5.0	U
3,3'-Dichlorobenzidine	5.0	5.0	U
Benzo(a)anthracene	5.0	5.0	U
Chrysene	5.0	5.0	U
Bis(2-ethylhexyl)phthalate	5.0	5.0	U
Di-n-octylphthalate	5.0	5.0	U
Benzo(b)fluoranthene	5.0	5.0	U
Benzo(k)fluoranthene	5.0	5.0	U
Benzo(a)pyrene	5.0	5.0	U
Indeno(1,2,3-cd)pyrene	5.0	5.0	U
Dibenzo(a,h)anthracene	5.0	5.0	U
Benzo(g,h,i)perylene	5.0	5.0	U
2,3,4,6-Tetrachlorophenol	5.0	5.0	U

Volume (mL) : 1000

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR0(SIM)	
STATION LOCATION		ER-1	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	0.10	0.10	U *
2-Methylnaphthalene	0.10	0.10	U *
Acenaphthylene	0.10	0.10	U *
Acenaphthene	0.10	0.10	U *
Fluorene	0.10	0.10	U *
Pentachlorophenol	0.20	0.20	U
Phenanthrene	0.10	0.10	U *
Anthracene	0.10	0.10	U *
Fluoranthene	0.10	0.10	U *
Pyrene	0.10	0.10	U *
Benzo(a)anthracene	0.10	0.10	U *
Chrysene	0.10	0.10	U *
Benzo(b)fluoranthene	0.10	0.10	U *
Benzo(k)fluoranthene	0.10	0.10	U *
Benzo(a)pyrene	0.10	0.10	U *
Indeno(1,2,3-cd)pyrene	0.10	0.10	U *
Dibenzo(a,h)anthracene	0.10	0.10	U *
Benzo(g,h,i)perylene	0.10	0.10	U *

Volume (mL) : 1000

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR1	
STATION LOCATION		ER-2	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	5.0	5.0	U
Phenol	5.0	5.0	U
Bis(2-chloroethyl)ether	5.0	5.0	U
2-Chlorophenol	5.0	5.0	U
2-Methylphenol	5.0	5.0	U
2,2'-Oxybis(1-chloropropane)	5.0	5.0	U
Acetophenone	5.0	5.0	U
4-Methylphenol	5.0	5.0	U
N-Nitroso-di-n-propylamine	5.0	5.0	U
Hexachloroethane	5.0	5.0	U
Nitrobenzene	5.0	5.0	U
Isophorone	5.0	5.0	U
2-Nitrophenol	5.0	5.0	U
2,4-Dimethylphenol	5.0	5.0	U
Bis(2-chloroethoxy)methane	5.0	5.0	U
2,4-Dichlorophenol	5.0	5.0	U
Naphthalene	5.0	5.0	U
4-Chloroaniline	5.0	5.0	U
Hexachlorobutadiene	5.0	5.0	U
Caprolactam	5.0	5.0	U
4-Chloro-3-methylphenol	5.0	5.0	U
2-Methylnaphthalene	5.0	5.0	U
Hexachlorocyclopentadiene	5.0	5.0	U
2,4,6-Trichlorophenol	5.0	5.0	U
2,4,5-Trichlorophenol	5.0	5.0	U
1,1'-Biphenyl	5.0	5.0	U
2-Chloronaphthalene	5.0	5.0	U
2-Nitroaniline	10	10	U
Dimethylphthalate	5.0	5.0	U
2,6-Dinitrotoluene	5.0	5.0	U
Acenaphthylene	5.0	5.0	U
3-Nitroaniline	10	10	U
Acenaphthene	5.0	5.0	U
2,4-Dinitrophenol	10	10	U
4-Nitrophenol	10	10	U
Dibenzofuran	5.0	5.0	U
2,4-Dinitrotoluene	5.0	5.0	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR1	
STATION LOCATION		ER-2	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	5.0	5.0	U
Fluorene	5.0	5.0	U
4-Chlorophenyl-phenylether	5.0	5.0	U
4-Nitroaniline	10	10	U
4,6-Dinitro-2-methylphenol	10	10	U
N-Nitrosodiphenylamine	5.0	5.0	U
1,2,4,5-Tetrachlorobenzene	5.0	5.0	U
4-Bromophenyl-phenylether	5.0	5.0	U
Hexachlorobenzene	5.0	5.0	U
Atrazine	5.0	5.0	U
Pentachlorophenol	10	10	U *
Phenanthrene	5.0	5.0	U
Anthracene	5.0	5.0	U
Carbazole	5.0	5.0	U
Di-n-butylphthalate	5.0	5.0	U
Fluoranthene	5.0	5.0	U
Pyrene	5.0	5.0	U
Butylbenzylphthalate	5.0	5.0	U
3,3'-Dichlorobenzidine	5.0	5.0	U
Benzo(a)anthracene	5.0	5.0	U
Chrysene	5.0	5.0	U
Bis(2-ethylhexyl)phthalate	5.0	5.0	U
Di-n-octylphthalate	5.0	5.0	U
Benzo(b)fluoranthene	5.0	5.0	U
Benzo(k)fluoranthene	5.0	5.0	U
Benzo(a)pyrene	5.0	5.0	U
Indeno(1,2,3-cd)pyrene	5.0	5.0	U
Dibenzo(a,h)anthracene	5.0	5.0	U
Benzo(g,h,i)perylene	5.0	5.0	U
2,3,4,6-Tetrachlorophenol	5.0	5.0	U

Volume (mL) : 1000

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR1(SIM)	
STATION LOCATION		ER-2	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	0.10	0.10	U *
2-Methylnaphthalene	0.10	0.10	U *
Acenaphthylene	0.10	0.10	U *
Acenaphthene	0.10	0.10	U *
Fluorene	0.10	0.10	U *
Pentachlorophenol	0.20	0.20	U
Phenanthrene	0.10	0.10	U *
Anthracene	0.10	0.10	U *
Fluoranthene	0.10	0.10	U *
Pyrene	0.10	0.10	U *
Benzo(a)anthracene	0.10	0.10	U *
Chrysene	0.10	0.10	U *
Benzo(b)fluoranthene	0.10	0.10	U *
Benzo(k)fluoranthene	0.10	0.10	U *
Benzo(a)pyrene	0.10	0.10	U *
Indeno(1,2,3-cd)pyrene	0.10	0.10	U *
Dibenzo(a,h)anthracene	0.10	0.10	U *
Benzo(g,h,i)perylene	0.10	0.10	U *

Volume (mL) : 1000

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR2	
STATION LOCATION		ER-3	
Semivolatile	ADJ CRQL	RESULT	FLAG
Benzaldehyde	5.0	5.0	U
Phenol	5.0	5.0	U
Bis(2-chloroethyl)ether	5.0	5.0	U
2-Chlorophenol	5.0	5.0	U
2-Methylphenol	5.0	5.0	U
2,2'-Oxybis(1-chloropropane)	5.0	5.0	U
Acetophenone	5.0	5.0	U
4-Methylphenol	5.0	5.0	U
N-Nitroso-di-n-propylamine	5.0	5.0	U
Hexachloroethane	5.0	5.0	U
Nitrobenzene	5.0	5.0	U
Isophorone	5.0	5.0	U
2-Nitrophenol	5.0	5.0	U
2,4-Dimethylphenol	5.0	5.0	U
Bis(2-chloroethoxy)methane	5.0	5.0	U
2,4-Dichlorophenol	5.0	5.0	U
Naphthalene	5.0	5.0	U
4-Chloroaniline	5.0	5.0	U
Hexachlorobutadiene	5.0	5.0	U
Caprolactam	5.0	5.0	U
4-Chloro-3-methylphenol	5.0	5.0	U
2-Methylnaphthalene	5.0	5.0	U
Hexachlorocyclopentadiene	5.0	5.0	U
2,4,6-Trichlorophenol	5.0	5.0	U
2,4,5-Trichlorophenol	5.0	5.0	U
1,1'-Biphenyl	5.0	5.0	U
2-Chloronaphthalene	5.0	5.0	U
2-Nitroaniline	10	10	U
Dimethylphthalate	5.0	5.0	U
2,6-Dinitrotoluene	5.0	5.0	U
Acenaphthylene	5.0	5.0	U
3-Nitroaniline	10	10	U
Acenaphthene	5.0	5.0	U
2,4-Dinitrophenol	10	10	U
4-Nitrophenol	10	10	U
Dibenzofuran	5.0	5.0	U
2,4-Dinitrotoluene	5.0	5.0	U

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR2	
STATION LOCATION		ER-3	
Semivolatile	ADJ CRQL	RESULT	FLAG
Diethylphthalate	5.0	5.0	U
Fluorene	5.0	5.0	U
4-Chlorophenyl-phenylether	5.0	5.0	U
4-Nitroaniline	10	10	U
4,6-Dinitro-2-methylphenol	10	10	U
N-Nitrosodiphenylamine	5.0	5.0	U
1,2,4,5-Tetrachlorobenzene	5.0	5.0	U
4-Bromophenyl-phenylether	5.0	5.0	U
Hexachlorobenzene	5.0	5.0	U
Atrazine	5.0	5.0	U
Pentachlorophenol	10	10	U *
Phenanthrene	5.0	5.0	U
Anthracene	5.0	5.0	U
Carbazole	5.0	5.0	U
Di-n-butylphthalate	5.0	5.0	U
Fluoranthene	5.0	5.0	U
Pyrene	5.0	5.0	U
Butylbenzylphthalate	5.0	5.0	U
3,3'-Dichlorobenzidine	5.0	5.0	U
Benzo(a)anthracene	5.0	5.0	U
Chrysene	5.0	5.0	U
Bis(2-ethylhexyl)phthalate	5.0	5.0	U
Di-n-octylphthalate	5.0	5.0	U
Benzo(b)fluoranthene	5.0	5.0	U
Benzo(k)fluoranthene	5.0	5.0	U
Benzo(a)pyrene	5.0	5.0	U
Indeno(1,2,3-cd)pyrene	5.0	5.0	U
Dibenzo(a,h)anthracene	5.0	5.0	U
Benzo(g,h,i)perylene	5.0	5.0	U
2,3,4,6-Tetrachlorophenol	5.0	5.0	U

Volume (mL) : 1000

Dilution Factor : 1

Number of TIC's : 3

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR2(SIM)	
STATION LOCATION		ER-3	
Semivolatile	ADJ CRQL	RESULT	FLAG
Naphthalene	0.10	0.094	*
2-Methylnaphthalene	0.10	0.10	U *
Acenaphthylene	0.10	0.10	U *
Acenaphthene	0.10	0.10	U *
Fluorene	0.10	0.10	U *
Pentachlorophenol	0.20	0.20	U
Phenanthrene	0.10	0.10	U *
Anthracene	0.10	0.10	U *
Fluoranthene	0.10	0.10	U *
Pyrene	0.10	0.10	U *
Benzo(a)anthracene	0.10	0.10	U *
Chrysene	0.10	0.10	U *
Benzo(b)fluoranthene	0.10	0.10	U *
Benzo(k)fluoranthene	0.10	0.10	U *
Benzo(a)pyrene	0.10	0.10	U *
Indeno(1,2,3-cd)pyrene	0.10	0.10	U *
Dibenzo(a,h)anthracene	0.10	0.10	U *
Benzo(g,h,i)perylene	0.10	0.10	U *

Volume (mL) : 1000

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR0	
STATION LOCATION		ER-1	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	0.050	0.050	U
beta-BHC	0.050	0.050	U
delta-BHC	0.050	0.050	U
gamma-BHC (Lindane)	0.050	0.050	U
Heptachlor	0.050	0.050	U
Aldrin	0.050	0.050	U
Heptachlor epoxide	0.050	0.050	U
Endosulfan I	0.050	0.050	U
Dieldrin	0.10	0.10	U
4,4'-DDE	0.10	0.10	U
Endrin	0.10	0.10	U
Endosulfan II	0.10	0.10	U
4,4'-DDD	0.10	0.10	U
Endosulfan sulfate	0.10	0.10	U
4,4'-DDT	0.10	0.10	U
Methoxychlor	0.50	0.50	U
Endrin ketone	0.10	0.10	U
Endrin aldehyde	0.10	0.10	U
alpha-Chlordane	0.050	0.050	U
gamma-Chlordane	0.050	0.050	U
Toxaphene	5.0	5.0	U

Volume (mL) : 1000

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR1	
STATION LOCATION		ER-2	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	0.050	0.050	U
beta-BHC	0.050	0.050	U
delta-BHC	0.050	0.050	U
gamma-BHC (Lindane)	0.050	0.050	U
Heptachlor	0.050	0.050	U
Aldrin	0.050	0.050	U
Heptachlor epoxide	0.050	0.050	U
Endosulfan I	0.050	0.050	U
Dieldrin	0.10	0.10	U
4,4'-DDE	0.10	0.10	U
Endrin	0.10	0.10	U
Endosulfan II	0.10	0.10	U
4,4'-DDD	0.10	0.10	U
Endosulfan sulfate	0.10	0.10	U
4,4'-DDT	0.10	0.10	U
Methoxychlor	0.50	0.50	U
Endrin ketone	0.10	0.10	U
Endrin aldehyde	0.10	0.10	U
alpha-Chlordane	0.050	0.050	U
gamma-Chlordane	0.050	0.050	U
Toxaphene	5.0	5.0	U

Volume (mL) : 1000

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR2	
STATION LOCATION		ER-3	
Pesticide	ADJ CRQL	RESULT	FLAG
alpha-BHC	0.050	0.050	U
beta-BHC	0.050	0.050	U
delta-BHC	0.050	0.050	U
gamma-BHC (Lindane)	0.050	0.050	U
Heptachlor	0.050	0.050	U
Aldrin	0.050	0.050	U
Heptachlor epoxide	0.050	0.050	U
Endosulfan I	0.050	0.050	U
Dieldrin	0.10	0.10	U
4,4'-DDE	0.10	0.10	U
Endrin	0.10	0.10	U
Endosulfan II	0.10	0.10	U
4,4'-DDD	0.10	0.10	U
Endosulfan sulfate	0.10	0.10	U
4,4'-DDT	0.10	0.10	U
Methoxychlor	0.50	0.50	U
Endrin ketone	0.10	0.10	U
Endrin aldehyde	0.10	0.10	U
alpha-Chlordane	0.050	0.050	U
gamma-Chlordane	0.050	0.050	U
Toxaphene	5.0	5.0	U

Volume (mL) : 1000

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR0	
STATION LOCATION		ER-1	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	1.0	1.0	U
Aroclor-1221	0.20	0.20	U
Aroclor-1232	1.0	1.0	U
Aroclor-1242	0.20	0.20	U
Aroclor-1248	1.0	1.0	U
Aroclor-1254	0.20	0.20	U
Aroclor-1260	1.0	1.0	U
Aroclor-1262	1.0	1.0	U
Aroclor-1268	1.0	1.0	U

Volume (mL) : 1000

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR1	
STATION LOCATION		ER-2	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	1.0	1.0	U
Aroclor-1221	0.20	0.20	U
Aroclor-1232	1.0	1.0	U
Aroclor-1242	0.20	0.20	U
Aroclor-1248	1.0	1.0	U
Aroclor-1254	0.20	0.20	U
Aroclor-1260	1.0	1.0	U
Aroclor-1262	1.0	1.0	U
Aroclor-1268	1.0	1.0	U

Volume (mL) : 1000

Dilution Factor : 1

Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

ORGANIC DATA SUMMARY

Case No. : 42040

SDG : F4XR0

Reviewer : Y. Hsieh

Laboratory : KAP

Matrix : Water

Units : ug/L

EPA SAMPLE No.		F4XR2	
STATION LOCATION		ER-3	
Aroclor	ADJ CRQL	RESULT	FLAG
Aroclor-1016	1.0	1.0	U
Aroclor-1221	0.20	0.20	U
Aroclor-1232	1.0	1.0	U
Aroclor-1242	0.20	0.20	U
Aroclor-1248	1.0	1.0	U
Aroclor-1254	0.20	0.20	U
Aroclor-1260	1.0	1.0	U
Aroclor-1262	1.0	1.0	U
Aroclor-1268	1.0	1.0	U

Volume (mL) : 1000

Dilution Factor : 1

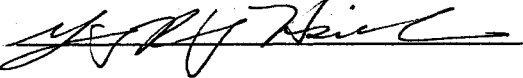
Note 1: For the results listed in the Data Summary Table, ESAT has replaced the laboratory assigned flags with ESAT Organic Data Qualifiers. The ESAT flags indicate the technical usability of the reported results.

Note 2: Adjusted CRQL is equal to SQL (sample-specific contract required quantitation limit).

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No. 42040 SDG No. F4XR0 SDG Nos. To Follow _____ Mod. Ref No. 2207.0 Date Rec 12/30/11

EPA Lab ID: <u>KAP</u>	ORIGINALS	YES	NO	N/A
Lab Location: <u>The Woodlands, TX</u>	CUSTODY SEALS			
Region: <u>6</u> Audit No.: <u>42040/F4XR0</u>	1. Present on package?	X		
Re_Submitted CSF? Yes _____ No <u>X</u>	2. Intact upon receipt?	X		
Box No(s): <u>1</u>	FORM DC-2			
COMMENTS:	3. Numbering scheme accurate?	X		
	4. Are enclosed documents listed?	X		
	5. Are listed documents enclosed?	X		
	FORM DC-1			
	6. Present?	X		
	7. Complete?	X		
	8. Accurate?	X		
	TRAFFIC REPORT /CHAIN-OF-CUSTODY RECORD(s)			
	9. Signed?	X		
	10. Dated?	X		
	AIRBILLS/AIRBILL STICKER			
	11. Present?	X		
	12. Signed?	X		
	13. Dated?	X		
	SAMPLE TAGS			
	14. Does DC-1 list tags as being included?	X		
	15. Present?	X		
	OTHER DOCUMENTS			
16. Complete?	X			
17. Legible?	X			
18. Original?		X		
Over for additional comments.	18a. If "NO", does the copy indicate where original documents are located?	X		

Audited by: 
 Audited by: _____
 Signature

Ying-Ping Hsieh / ESAT Data Reviewer

 Printed Name/Title

Date 2/7/12
 Date _____

DC-2__

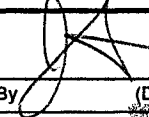


USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 42040

DAS No:

R

Region: 6	Date Shipped: 12/6/2011	Chain of Custody Record	Sampler Signature: 
Project Code: EP-W-06-004	Carrier Name: FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code: TXD099801102	Airbill: 7978 0777 7395	1 <i>Wall</i> 12/6/11 900	
CERCLIS ID:	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065	2	
Spill ID:		3	
Site Name/State: State Marine of Port Arthur Superfund Site/		4	
Project Leader: STAN WALLACE			
Action: Five Year Review Sampling			
Sampling Co: EA Engineering, Science, & Technology			

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
F4XR0	Water - Field QC/ JASON STROUP	L/G	BNA/BNASIM (21)	6-445885 (Ice Only), 6-445886 (Ice Only), 6-445887 (Ice Only), 6-445888 (Ice Only) (4)	ER-1	S: 12/5/2011 18:00		Rinsate

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: BNA/BNASIM = BNA/BNASIM(SV/SVSIM) by SOM01.2	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 6-574702950-120611-0004

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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Page 22 of 26



USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 42040

DAS No:

R

Region: 6	Date Shipped: 12/7/2011	Chain of Custody Record	Sampler Signature:	
Project Code: EP-W-06-004	Carrier Name: FedEx		Relinquished By (Date / Time)	Received By (Date / Time)
Account Code: 27	Airbill: 7978 1276 8676		1 <i>Stall</i> 12/7/11 1900	
CERCLIS ID: TXD099801102	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065		2	
Spill ID:			3	
Site Name/State: State Marine of Port Arthur Superfund Site/		4		
Project Leader: STAN WALLACE				
Action: Five Year Review Sampling				
Sampling Co: EA Engineering, Science, & Technology				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
F4XR1	Water - Field QC/ JASON STROUP	L/G	BNA/BNASIM (21)	6-445893 (Ice Only), 6-445894 (Ice Only), 6-445895 (Ice Only), 6-445896 (Ice Only) (4)	ER-2	S: 12/6/2011 16:00		Rinsate

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____
BNA/BNASIM = BNA/BNASIM(SV/SVSIM) by SOM01.2			

TR Number: 6-574702950-120711-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 42040

DAS No:

R

Region: 6	Date Shipped: 12/7/2011	Chain of Custody Record		Sampler Signature:
Project Code: EP-W-06-004	Carrier Name: FedEx	Relinquished By (Date / Time)		Received By (Date / Time)
Account Code: TXD099801102	Airbill: 7954 8232 2367	1 12/7/11 900		
CERCLIS ID:	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065	2		
Spill ID:		3		
Site Name/State: State Marine of Port Arthur Superfund Site/		4		
Project Leader: STAN WALLACE				
Action: Five Year Review Sampling				
Sampling Co: EA Engineering, Science, & Technology				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
F4XR2	Water - Field QC/ JASON STROUP	L/G	BNA/BNASIM (21)	6-499112 (Ice Only), 6-499113 (Ice Only), 6-499114 (Ice Only), 6-499115 (Ice Only) (4)	ER-3	S: 12/7/2011 15:00		Rinsate

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: BNA/BNASIM = BNA/BNASIM(SV/SVSIM) by SOM01.2	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 6-574702950-120711-0006

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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Page 24 of 26

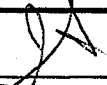


USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 42040

DAS No:

R

Region: 6	Date Shipped: 12/8/2011	Chain of Custody Record	Sampler Signature: 	
Project Code: EP-W-06-004	Carrier Name: FedEx		Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	Airbill: 7978 1801 8214		1 <i>SWW</i> 12/8/11 1400	
CERCLIS ID: TXD099801102	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065		2	
Spill ID:			3	
Site Name/State: State Marine of Port Arthur Superfund Site/		4		
Project Leader: STAN WALLACE				
Action: Five Year Review Sampling				
Sampling Co: EA Engineering, Science, & Technology				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
F4XR0	Water - Field QC/ JASON STROUP	L/G	PEST. (21)	6-445889 (Ice Only), 6-445890 (Ice Only) (2)	ER-1	S: 12/5/2011	18:00		Rinsate
F4XR1	Water - Field QC/ JASON STROUP	L/G	PEST. (21)	6-445897 (Ice Only), 6-445898 (Ice Only) (2)	ER-2	S: 12/6/2011	16:00		Rinsate
F4XR2	Water - Field QC/ JASON STROUP	L/G	PEST. (21)	6-499116 (Ice Only), 6-499117 (Ice Only) (2)	ER-3	S: 12/7/2011	15:00		Rinsate

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____
PEST. = Pesticides by SOM01.2			

TR Number: 6-574702950-120811-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 42040

DAS No:

R

Region: 6	Date Shipped: 12/8/2011	Chain of Custody Record	Sampler Signature:	
Project Code: EP-W-06-004	Carrier Name: FedEx		Relinquished By (Date / Time)	Received By (Date / Time)
Account Code: 1	Airbill: 7954 8856 7848		1 12/8/11 1400	
CERCLIS ID: TXD099801102	Shipped to: KAP Technologies Inc. 9391 Grogans Mill Rd. Suite A2 The Woodlands TX 77380 (281) 367-0065		2	
Spill ID:			3	
Site Name/State: State Marine of Port Arthur Superfund Site/		4		
Project Leader: STAN WALLACE				
Action: Five Year Review Sampling				
Sampling Co: EA Engineering, Science, & Technology				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	QC Type
F4XR0	Water - Field QC/ JASON STROUP	L/G	ARO (21)	6-445891 (Ice Only), 6-445892 (Ice Only) (2)	ER-1	S: 12/5/2011	18:00		Rinsate
F4XR1	Water - Field QC/ JASON STROUP	L/G	ARO (21)	6-445899 (Ice Only), 6-445900 (Ice Only) (2)	ER-2	S: 12/6/2011	16:00		Rinsate
F4XR2	Water - Field QC/ JASON STROUP	L/G	ARO (21)	6-499118 (Ice Only), 6-499119 (Ice Only) (2)	ER-3	S: 12/7/2011	15:00		Rinsate

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____
ARO = Aroclor (with MA 2207.0) by SOM01.2			

TR Number: 6-574702950-120811-0009

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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ADDENDUM

CADRE NARRATIVE

National Functional Guidelines Report #03**Lab** KAP(KAP Technologies, Inc.) **SDG** F4XR0 **Case** 42040 **Contract** EPW11031 **Region** 6 **DDTID** 141744 **SOW** SOM01.2***Data Review Reports***

Continuing Calibration Verification

Continuing Calibration Verification	BNA_SIM
BC14	The following semivolatile samples are associated with a CCV with relative response factors (RRF50) outside criteria. Detected compounds are qualified J. Nondetected compounds are qualified R.
	F4XR0, F4XR1, F4XR2, SBLK88
	Pentachlorophenol SSTD0.4YL
	F4XR0, F4XR1, F4XR2, SBLK88

National Functional Guidelines Report #03**Lab** KAP(KAP Technologies, Inc.) **SDG** F4XR0 **Case** 42040 **Contract** EPW11031 **Region** 6 **DDTID** 141744 **SOW** SOM01.2***Data Review Reports***

Detection Limit

Detection Limit	BNA_SIM
BDL1	The following semivolatile samples have analyte concentrations below the quantitaion limit (CRQL). Detected compounds are qualified J. Nondetected compounds are not qualified.
	F4XR2
	Naphthalene F4XR2

National Functional Guidelines Report #03

Lab KAP(KAP Technologies, Inc.) SDG F4XR0 Case 42040 Contract EPW11031 Region 6 DDTID 141744 SOW SOM01.2

Data Review Reports

Detection Limit

Detection Limit	Pest
PDL1	The following pesticide samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified J. Nondetected compounds are not qualified.
	PLCS43
	4,4'-DDE PLCS43
	Endosulfan sulfate PLCS43
	gamma-Chlordane PLCS43
	gamma-BHC (Lindane) PLCS43
	Dieldrin PLCS43
	Endrin PLCS43
	Heptachlor epoxide PLCS43

National Functional Guidelines Report #03

Lab KAP(KAP Technologies, Inc.) SDG F4XR0 Case 42040 Contract EPW11031 Region 6 DDTID 141744 SOW SOM01.2

Data Review Reports

Initial Calibration

Initial Calibration	BNA_SIM
BC15	The following semivolatile samples are associated with an initial calibration with relative response factors (RRFs) outside criteria. Detected compounds are qualified J. Nondetected compounds are qualified R.
	F4XR0, F4XR1, F4XR2, SBLK88
	Pentachlorophenol SSTD0.2YJ, SSTD0.4YJ, SSTD0.8YJ, SSTD001YJ
	F4XR0, F4XR1, F4XR2, SBLK88

National Functional Guidelines Report #03

Lab KAP(KAP Technologies, Inc.) SDG F4XR0 Case 42040 Contract EPW11031 Region 6 DDTID 141744 SOW SOM01.2

Data Review Reports

Laboratory Control Sample

Laboratory Control Sample	Aroclor
ALCS6	The following aroclor samples are not qualified for laboratory control sample (LCS) due to missing concentration of the LCS spiking solution. Detected and nondetected compounds are not qualified.
	F4XR0, F4XR1, F4XR2
	Aroclor-1260 ALCS42
	Aroclor-1016 ALCS42
Laboratory Control Sample	Aroclor
ALCS62	The following aroclor samples are not qualified for laboratory control sample (LCS) due to missing volume of the LCS spiking solution. Detected and nondetected compounds are not qualified.
	F4XR0, F4XR1, F4XR2
	Aroclor-1260 ALCS42
	Aroclor-1016 ALCS42
Laboratory Control Sample	Aroclor
ALCS64	The following aroclor samples are not qualified for laboratory control sample (LCS) due to missing amount added of the LCS compound. Detected and nondetected compounds are not qualified.
	F4XR0, F4XR1, F4XR2
	Aroclor-1260 ALCS42
	Aroclor-1016 ALCS42

National Functional Guidelines Report #03

Lab KAP(KAP Technologies, Inc.) SDG F4XR0 Case 42040 Contract EPW11031 Region 6 DDTID 141744 SOW SOM01.2

Data Review Reports

TIC

TIC	BNA
BTIC1	A library search indicates a match at or above 85% for a TIC compound in the semivolatile sample. Detected compounds are qualified NJ. Nondetected compounds are not qualified.
	F4XR0, F4XR2
	1,2-Benzenedicarboxylic acid, butyl 2-methylpropyl ester F4XR0
	1,2-Benzenedicarboxylic acid, butyl 8-methylnonyl ester F4XR2
TIC	BNA
BTIC2	A library search indicates a match below 85% for a TIC compound in the semivolatile sample. Detected compounds are qualified J. Nondetected compounds are not qualified.
	F4XR0, F4XR1, F4XR2, SBLK88
	Unknown-03 F4XR1
	Unknown-01 F4XR0, F4XR1, F4XR2, SBLK88
	Unknown-02 F4XR0, F4XR1, F4XR2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Laboratory

Environmental Services Branch
10625 Fallstone Road, Houston, TX 77099
Phone: (281)983-2100 Fax: (281)983-2248

Final Analytical Report

Site Name -----State Marine

Sample Collection Date(s)-- 12/05/11 - 12/08/11

Contact----- Rafael Casanova (6SF-AP)

Report Date----- 01/24/12

Project #----- 12SF034

Work Order(s)----- 1112010

1112013

1112015

Analyses included in this report:

Cyanide 335.4

Metals ESAT Mercury CLP

Metals ICP/MS CLP

VOA CLP Low Level (0.5)

Cyanide, Total 335.4

Metals ICP CLP

Solids, Dry Weight

VOA CLP Routine List

Report Narrative

VOA:

Acetone is qualified as blank related in sample 1112010-07 due to the presence of this analyte in the associated method blank.

Metals ICP-MS:

Batch: B1L0902: MS1/MSD1: Antimony and arsenic spike recoveries are low; the associated sample results are qualified and may be biased low. The RPD for antimony is outside of acceptance limits.

Batch: B1L1403: MS1/MSD1: Antimony spike recovery is low; the associated sample result is qualified and may be biased low.

Lead spike recovery is high; the associated sample result is qualified and may be biased high. The RPD for lead is outside of the acceptance limits.

Report Narrative (cont'd)

Metals ICP:

Batch: B1L0901:

BS1 has a low recovery for silver; the associated sample results are qualified and may be biased low.

MS1/MSD1: Spike recoveries for silver, chromium, cobalt, copper and nickel were low; the associated sample result is qualified and may be biased low.

Spike recovery is high for potassium; the associated sample result is qualified and may be biased high.

Sample concentrations for aluminum, iron, and manganese exceed the spike added by a factor of four or more and cannot be reliably calculated.

Batch: B1L1402:

MS1/MSD1: Spike recoveries are low for calcium, manganese, and zinc are low; the associated sample results are qualified and may be biased low.

Spike concentration for copper is high; the associated sample result is qualified and may be biased high.

Sample concentrations for aluminum, and iron exceed the spike added concentration by a factor of four or more and cannot be reliably calculated.

The RPD for zinc is high.

Standard procedures for quality assurance and quality control were followed in the analysis and reporting of the sample results. The results apply only to the samples tested. This final report should only be reproduced in full.

Reporting limits are adjusted for sample size and matrix interference.

Report Approvals:

Richard McMillin
Region 6 Laboratory Manager

David Neleigh
Region 6 Laboratory Branch Chief



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Environmental Services Branch Laboratory

10625 Fallstone Road
Houston, Texas 77099

Sample Receipt and Disposal

Site Name: State Marine

Project Number: 12SF034

Data Management Coordinator: Christy Warren

Data Management Coordinator Signature

Date

Date Transmitted: ____/____/____

Please have the U.S. EPA Project Manager/Officer call the Data Management Coordinator at 3-2137 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Christy Warren
Data Management Coordinator
Region 6 Laboratory
6MD-HS

Received by and Date

Comments:

The laboratory routinely disposes of samples 90 days after all analyses have been completed. If you have a need to hold these samples in custody longer than 90 days, please sign below.

Signature

Date

Please provide a reason for holding:



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Sample Type	Date Collected	Date Received
C-SD5-1	1112010-01	Solid	12/6/11 11:45	12/07/11 09:55
D-SD5-1	1112010-02	Solid	12/6/11 10:15	12/07/11 09:55
ER-1	1112010-03	Liquid	12/5/11 18:00	12/07/11 09:55
ER-2	1112010-04	Liquid	12/6/11 16:00	12/07/11 09:55
E-SD5-1	1112010-05	Solid	12/6/11 9:30	12/07/11 09:55
FB-1	1112010-06	Liquid	12/5/11 17:30	12/07/11 09:55
FB-2	1112010-07	Liquid	12/6/11 9:40	12/07/11 09:55
F-SD5-1	1112010-08	Solid	12/5/11 15:05	12/07/11 09:55
G-SD5-1	1112010-09	Solid	12/5/11 12:05	12/07/11 09:55
J-SD5-1	1112010-10	Solid	12/6/11 8:45	12/07/11 09:55
L-SD5-1	1112010-11	Solid	12/5/11 11:30	12/07/11 09:55
L-SD5-1 D	1112010-12	Solid	12/5/11 11:30	12/07/11 09:55
N-SD5-1	1112010-13	Solid	12/5/11 10:35	12/07/11 09:55
P-SD5-1	1112010-14	Solid	12/5/11 16:30	12/07/11 09:55
TB-1	1112010-15	Liquid	12/5/11 14:35	12/07/11 09:55
B-SD5-1	1112013-01	Solid	12/6/11 12:30	12/08/11 09:20
C-SD5-1	1112013-02	Solid	12/6/11 11:45	12/08/11 09:20
D-SD5-1	1112013-03	Solid	12/6/11 10:15	12/08/11 09:20
E-SD5-1	1112013-04	Solid	12/6/11 9:30	12/08/11 09:20
F-SD5-1	1112013-05	Solid	12/5/11 15:05	12/08/11 09:20
G-SD5-1	1112013-06	Solid	12/5/11 12:05	12/08/11 09:20
J-SD5-1	1112013-07	Solid	12/6/11 8:45	12/08/11 09:20
K-SD5-1	1112013-08	Solid	12/6/11 15:00	12/08/11 09:20
L-SD5-1	1112013-09	Solid	12/5/11 11:30	12/08/11 09:20
L-SD5-1 D	1112013-10	Solid	12/5/11 11:30	12/08/11 09:20
N-SD5-1	1112013-11	Solid	12/5/11 10:35	12/08/11 09:20
O-SD5-1	1112013-12	Solid	12/7/11 10:30	12/08/11 09:20
O-SD5-1 D	1112013-13	Solid	12/7/11 10:30	12/08/11 09:20
P-SD5-1	1112013-14	Solid	12/5/11 16:30	12/08/11 09:20
Q-SD5-1	1112013-15	Solid	12/7/11 9:00	12/08/11 09:20
TB-2	1112013-16	Liquid	12/6/11 14:00	12/08/11 09:20
TB-3	1112013-17	Liquid	12/7/11 13:30	12/08/11 09:20
ER-1	1112015-01	Liquid	12/5/11 18:00	12/09/11 09:15
ER-2	1112015-02	Liquid	12/6/11 16:00	12/09/11 09:15
ER-3	1112015-03	Liquid	12/7/11 15:00	12/09/11 09:15



Environmental Protection Agency
Region 6 Laboratory

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ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Sample Type	Date Collected	Date Received
FB-3	1112015-04	Liquid	12/7/11 14:40	12/09/11 09:15
A-SD5-1	1112015-05	Solid	12/7/11 11:45	12/09/11 09:15
B-SD5-1	1112015-06	Solid	12/8/11 12:30	12/09/11 09:15
C-SD5-1	1112015-07	Solid	12/6/11 11:45	12/09/11 09:15
H-SD5-1	1112015-08	Solid	12/7/11 14:35	12/09/11 09:15
K-SD5-1	1112015-09	Solid	12/6/11 15:00	12/09/11 09:15
M-SD5-1	1112015-10	Solid	12/7/11 9:45	12/09/11 09:15
O-SD5-1	1112015-11	Solid	12/7/11 10:30	12/09/11 09:15
O-SD5-1 D	1112015-12	Solid	12/7/11 10:30	12/09/11 09:15
Q-SD5-1	1112015-13	Solid	12/7/11 9:00	12/09/11 09:15
R-SD5-1	1112015-14	Solid	12/7/11 15:10	12/09/11 09:15
S-SD5-1	1112015-15	Solid	12/7/11 15:35	12/09/11 09:15
TB-4	1112015-16	Liquid	12/8/11 9:00	12/09/11 09:15



Environmental Protection Agency
Region 6 Laboratory

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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112010-03

Station ID: ER-1

Batch: B1L1201

Date Collected: 12/05/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	10.2		102	81-124	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	10.4		104	86-115	"	"
<i>Surr: 4-Bromofluorobenzene</i>	9.31		93.1	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		0.5	1	12/09/11	12/09/11
Chloromethane (74-87-3)	U		0.5	"	"	"
Vinyl chloride (75-01-4)	U		0.5	"	"	"
Bromomethane (74-83-9)	U		0.5	"	"	"
Chloroethane (75-00-3)	U		0.5	"	"	"
Trichlorofluoromethane (75-69-4)	U		0.5	"	"	"
1,1-Dichloroethene (75-35-4)	U		0.5	"	"	"
Carbon disulfide (75-15-0)	U		0.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		0.5	"	"	"
Acetone (67-64-1)	U		5.0	"	"	"
Methylene chloride (75-09-2)	U		0.5	"	"	"
Methyl acetate (79-20-9)	U		0.5	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		0.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		0.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		0.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		0.5	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		0.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		0.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		0.5	"	"	"
Cyclohexane (110-82-7)	U		0.5	"	"	"
Carbon tetrachloride (56-23-5)	U		0.5	"	"	"
Benzene (71-43-2)	U		0.5	"	"	"
Trichloroethene (79-01-6)	U		0.5	"	"	"
Methylcyclohexane (108-87-2)	U		0.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		0.5	"	"	"
Bromodichloromethane (75-27-4)	U		0.5	"	"	"



Environmental Protection Agency
Region 6 Laboratory

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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112010-03

Station ID: ER-1

Batch: B1L1201

Date Collected: 12/05/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		0.5	1	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		0.5	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		0.5	"	"	"
Dibromochloromethane (124-48-1)	U		0.5	"	"	"
Bromoform (75-25-2)	U		0.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	U		0.5	"	"	"
Tetrachloroethene (127-18-4)	U		0.5	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		0.5	"	"	"
Chlorobenzene (108-90-7)	U		0.5	"	"	"
Ethylbenzene (100-41-4)	U		0.5	"	"	"
meta-/para-Xylene (na)	U		1.0	"	"	"
ortho-Xylene (95-47-6)	U		0.5	"	"	"
Styrene (100-42-5)	U		0.5	"	"	"
Isopropylbenzene (98-82-8)	U		0.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"

This sample was received at pH 2.

Vinyl Chloride and Styrene may be biased low.

ng



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112010-04

Station ID: ER-2

Batch: B1L1201

Date Collected: 12/06/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	10.4		104	81-124	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	10.2		102	86-115	"	"
<i>Surr: 4-Bromofluorobenzene</i>	9.61		96.1	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		0.5	1	12/09/11	12/09/11
Chloromethane (74-87-3)	U		0.5	"	"	"
Vinyl chloride (75-01-4)	U		0.5	"	"	"
Bromomethane (74-83-9)	U		0.5	"	"	"
Chloroethane (75-00-3)	U		0.5	"	"	"
Trichlorofluoromethane (75-69-4)	U		0.5	"	"	"
1,1-Dichloroethene (75-35-4)	U		0.5	"	"	"
Carbon disulfide (75-15-0)	U		0.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		0.5	"	"	"
Acetone (67-64-1)	U		5.0	"	"	"
Methylene chloride (75-09-2)	U		0.5	"	"	"
Methyl acetate (79-20-9)	U		0.5	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		0.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		0.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		0.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		0.5	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		0.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		0.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		0.5	"	"	"
Cyclohexane (110-82-7)	U		0.5	"	"	"
Carbon tetrachloride (56-23-5)	U		0.5	"	"	"
Benzene (71-43-2)	U		0.5	"	"	"
Trichloroethene (79-01-6)	U		0.5	"	"	"
Methylcyclohexane (108-87-2)	U		0.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		0.5	"	"	"
Bromodichloromethane (75-27-4)	U		0.5	"	"	"



Environmental Protection Agency
Region 6 Laboratory

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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112010-04

Station ID: ER-2

Batch: B1L1201

Date Collected: 12/06/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		0.5	1	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		0.5	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		0.5	"	"	"
Dibromochloromethane (124-48-1)	U		0.5	"	"	"
Bromoform (75-25-2)	U		0.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	U		0.5	"	"	"
Tetrachloroethene (127-18-4)	U		0.5	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		0.5	"	"	"
Chlorobenzene (108-90-7)	U		0.5	"	"	"
Ethylbenzene (100-41-4)	U		0.5	"	"	"
meta-/para-Xylene (na)	U		1.0	"	"	"
ortho-Xylene (95-47-6)	U		0.5	"	"	"
Styrene (100-42-5)	U		0.5	"	"	"
Isopropylbenzene (98-82-8)	U		0.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"

This sample was received at pH 2.

Vinyl Chloride and Styrene may be biased low.

ng



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112010-06

Station ID: FB-1

Batch: B1L1201

Date Collected: 12/05/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	10.7		107	81-124	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	10.4		104	86-115	"	"
<i>Surr: 4-Bromofluorobenzene</i>	10.1		101	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		0.5	1	12/09/11	12/09/11
Chloromethane (74-87-3)	U		0.5	"	"	"
Vinyl chloride (75-01-4)	U		0.5	"	"	"
Bromomethane (74-83-9)	U		0.5	"	"	"
Chloroethane (75-00-3)	U		0.5	"	"	"
Trichlorofluoromethane (75-69-4)	U		0.5	"	"	"
1,1-Dichloroethene (75-35-4)	U		0.5	"	"	"
Carbon disulfide (75-15-0)	U		0.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		0.5	"	"	"
Acetone (67-64-1)	U		5.0	"	"	"
Methylene chloride (75-09-2)	U		0.5	"	"	"
Methyl acetate (79-20-9)	U		0.5	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		0.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		0.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		0.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		0.5	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		0.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		0.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		0.5	"	"	"
Cyclohexane (110-82-7)	U		0.5	"	"	"
Carbon tetrachloride (56-23-5)	U		0.5	"	"	"
Benzene (71-43-2)	U		0.5	"	"	"
Trichloroethene (79-01-6)	U		0.5	"	"	"
Methylcyclohexane (108-87-2)	U		0.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		0.5	"	"	"
Bromodichloromethane (75-27-4)	U		0.5	"	"	"



Environmental Protection Agency
Region 6 Laboratory

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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112010-06

Station ID: FB-1

Batch: B1L1201

Date Collected: 12/05/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		0.5	1	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		0.5	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		0.5	"	"	"
Dibromochloromethane (124-48-1)	U		0.5	"	"	"
Bromoform (75-25-2)	U		0.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	U		0.5	"	"	"
Tetrachloroethene (127-18-4)	U		0.5	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		0.5	"	"	"
Chlorobenzene (108-90-7)	U		0.5	"	"	"
Ethylbenzene (100-41-4)	U		0.5	"	"	"
meta-/para-Xylene (na)	U		1.0	"	"	"
ortho-Xylene (95-47-6)	U		0.5	"	"	"
Styrene (100-42-5)	U		0.5	"	"	"
Isopropylbenzene (98-82-8)	U		0.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"

This sample was received at pH 2.

Vinyl Chloride and Styrene may be biased low.

ng



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Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112010-07

Station ID: FB-2

Batch: B1L1201

Date Collected: 12/06/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	10.7		107	81-124	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	10.4		104	86-115	"	"
<i>Surr: 4-Bromofluorobenzene</i>	9.58		95.8	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		0.5	1	12/09/11	12/09/11
Chloromethane (74-87-3)	U		0.5	"	"	"
Vinyl chloride (75-01-4)	U		0.5	"	"	"
Bromomethane (74-83-9)	U		0.5	"	"	"
Chloroethane (75-00-3)	U		0.5	"	"	"
Trichlorofluoromethane (75-69-4)	U		0.5	"	"	"
1,1-Dichloroethene (75-35-4)	U		0.5	"	"	"
Carbon disulfide (75-15-0)	U		0.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		0.5	"	"	"
Acetone (67-64-1)	7.1	B	5.0	"	"	"
Methylene chloride (75-09-2)	U		0.5	"	"	"
Methyl acetate (79-20-9)	U		0.5	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		0.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		0.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		0.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		0.5	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		0.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		0.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		0.5	"	"	"
Cyclohexane (110-82-7)	U		0.5	"	"	"
Carbon tetrachloride (56-23-5)	U		0.5	"	"	"
Benzene (71-43-2)	U		0.5	"	"	"
Trichloroethene (79-01-6)	U		0.5	"	"	"
Methylcyclohexane (108-87-2)	U		0.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		0.5	"	"	"
Bromodichloromethane (75-27-4)	U		0.5	"	"	"



Environmental Protection Agency
Region 6 Laboratory

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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112010-07

Station ID: FB-2

Batch: B1L1201

Date Collected: 12/06/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		0.5	1	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		0.5	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		0.5	"	"	"
Dibromochloromethane (124-48-1)	U		0.5	"	"	"
Bromoform (75-25-2)	U		0.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	0.7		0.5	"	"	"
Tetrachloroethene (127-18-4)	U		0.5	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		0.5	"	"	"
Chlorobenzene (108-90-7)	U		0.5	"	"	"
Ethylbenzene (100-41-4)	U		0.5	"	"	"
meta-/para-Xylene (na)	U		1.0	"	"	"
ortho-Xylene (95-47-6)	U		0.5	"	"	"
Styrene (100-42-5)	U		0.5	"	"	"
Isopropylbenzene (98-82-8)	U		0.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"

This sample was received at pH 2.

Vinyl Chloride and Styrene may be biased low.

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112010-08

Station ID: F-SD5-1

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.079 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	48.0		96.0	82-120	12/08/11	12/08/11
<i>Surr: Toluene-d8</i>	46.2		92.3	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	44.6		89.3	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		246	50	12/08/11	12/08/11
Chloromethane (74-87-3)	U		246	"	"	"
Vinyl chloride (75-01-4)	U		98.4	"	"	"
Bromomethane (74-83-9)	U		246	"	"	"
Chloroethane (75-00-3)	U		98.4	"	"	"
Trichlorofluoromethane (75-69-4)	U		98.4	"	"	"
1,1-Dichloroethene (75-35-4)	U		98.4	"	"	"
Carbon disulfide (75-15-0)	U		98.4	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		98.4	"	"	"
Acetone (67-64-1)	U		492	"	"	"
Methylene chloride (75-09-2)	U		98.4	"	"	"
Methyl acetate (79-20-9)	U		246	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		98.4	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		98.4	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		98.4	"	"	"
1,1-Dichloroethane (75-34-3)	U		98.4	"	"	"
2-Butanone (78-93-3)	U		246	"	"	"
Chloroform (67-66-3)	U		98.4	"	"	"
1,2-Dichloroethane (107-06-2)	U		98.4	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		98.4	"	"	"
Cyclohexane (110-82-7)	U		98.4	"	"	"
Carbon tetrachloride (56-23-5)	U		98.4	"	"	"
Benzene (71-43-2)	U		98.4	"	"	"
Trichloroethene (79-01-6)	U		98.4	"	"	"
Methylcyclohexane (108-87-2)	U		98.4	"	"	"
1,2-Dichloropropane (78-87-5)	U		98.4	"	"	"
Bromodichloromethane (75-27-4)	U		98.4	"	"	"



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Region 6 Laboratory

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112010-08

Station ID: F-SD5-1

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.079 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		98.4	50	12/08/11	12/08/11
trans-1,3-Dichloropropene (10061-02-6)	U		98.4	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		98.4	"	"	"
Dibromochloromethane (124-48-1)	U		98.4	"	"	"
Bromoform (75-25-2)	U		98.4	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		246	"	"	"
Toluene (108-88-3)	U		98.4	"	"	"
Tetrachloroethene (127-18-4)	U		98.4	"	"	"
2-Hexanone (591-78-6)	U		246	"	"	"
1,2-Dibromoethane (106-93-4)	U		98.4	"	"	"
Chlorobenzene (108-90-7)	U		98.4	"	"	"
Ethylbenzene (100-41-4)	U		98.4	"	"	"
meta-/para-Xylene (na)	U		197	"	"	"
ortho-Xylene (95-47-6)	U		98.4	"	"	"
Styrene (100-42-5)	U		98.4	"	"	"
Isopropylbenzene (98-82-8)	U		98.4	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		98.4	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		98.4	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		98.4	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		98.4	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		246	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		246	"	"	"

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112010-09

Station ID: G-SD5-1

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.14 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	49.7		99.5	82-120	12/08/11	12/08/11
<i>Surr: Toluene-d8</i>	46.5		93.0	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	46.7		93.4	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		243	50	12/08/11	12/08/11
Chloromethane (74-87-3)	U		243	"	"	"
Vinyl chloride (75-01-4)	U		97.3	"	"	"
Bromomethane (74-83-9)	U		243	"	"	"
Chloroethane (75-00-3)	U		97.3	"	"	"
Trichlorofluoromethane (75-69-4)	U		97.3	"	"	"
1,1-Dichloroethene (75-35-4)	U		97.3	"	"	"
Carbon disulfide (75-15-0)	U		97.3	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		97.3	"	"	"
Acetone (67-64-1)	U		486	"	"	"
Methylene chloride (75-09-2)	U		97.3	"	"	"
Methyl acetate (79-20-9)	U		243	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		97.3	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		97.3	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		97.3	"	"	"
1,1-Dichloroethane (75-34-3)	U		97.3	"	"	"
2-Butanone (78-93-3)	U		243	"	"	"
Chloroform (67-66-3)	U		97.3	"	"	"
1,2-Dichloroethane (107-06-2)	U		97.3	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		97.3	"	"	"
Cyclohexane (110-82-7)	U		97.3	"	"	"
Carbon tetrachloride (56-23-5)	U		97.3	"	"	"
Benzene (71-43-2)	U		97.3	"	"	"
Trichloroethene (79-01-6)	U		97.3	"	"	"
Methylcyclohexane (108-87-2)	U		97.3	"	"	"
1,2-Dichloropropane (78-87-5)	U		97.3	"	"	"
Bromodichloromethane (75-27-4)	U		97.3	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112010-09

Station ID: G-SD5-1

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.14 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		97.3	50	12/08/11	12/08/11
trans-1,3-Dichloropropene (10061-02-6)	U		97.3	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		97.3	"	"	"
Dibromochloromethane (124-48-1)	U		97.3	"	"	"
Bromoform (75-25-2)	U		97.3	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		243	"	"	"
Toluene (108-88-3)	U		97.3	"	"	"
Tetrachloroethene (127-18-4)	U		97.3	"	"	"
2-Hexanone (591-78-6)	U		243	"	"	"
1,2-Dibromoethane (106-93-4)	U		97.3	"	"	"
Chlorobenzene (108-90-7)	U		97.3	"	"	"
Ethylbenzene (100-41-4)	U		97.3	"	"	"
meta-/para-Xylene (na)	U		195	"	"	"
ortho-Xylene (95-47-6)	U		97.3	"	"	"
Styrene (100-42-5)	U		97.3	"	"	"
Isopropylbenzene (98-82-8)	U		97.3	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		97.3	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		97.3	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		97.3	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		97.3	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		243	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		243	"	"	"

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112010-11

Station ID: L-SD5-1

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.02 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	49.8		99.6	82-120	12/08/11	12/08/11
<i>Surr: Toluene-d8</i>	46.5		92.9	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	46.5		93.0	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		249	50	12/08/11	12/08/11
Chloromethane (74-87-3)	U		249	"	"	"
Vinyl chloride (75-01-4)	U		99.6	"	"	"
Bromomethane (74-83-9)	U		249	"	"	"
Chloroethane (75-00-3)	U		99.6	"	"	"
Trichlorofluoromethane (75-69-4)	U		99.6	"	"	"
1,1-Dichloroethene (75-35-4)	U		99.6	"	"	"
Carbon disulfide (75-15-0)	U		99.6	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		99.6	"	"	"
Acetone (67-64-1)	U		498	"	"	"
Methylene chloride (75-09-2)	U		99.6	"	"	"
Methyl acetate (79-20-9)	U		249	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		99.6	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		99.6	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		99.6	"	"	"
1,1-Dichloroethane (75-34-3)	U		99.6	"	"	"
2-Butanone (78-93-3)	U		249	"	"	"
Chloroform (67-66-3)	U		99.6	"	"	"
1,2-Dichloroethane (107-06-2)	U		99.6	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		99.6	"	"	"
Cyclohexane (110-82-7)	U		99.6	"	"	"
Carbon tetrachloride (56-23-5)	U		99.6	"	"	"
Benzene (71-43-2)	U		99.6	"	"	"
Trichloroethene (79-01-6)	U		99.6	"	"	"
Methylcyclohexane (108-87-2)	U		99.6	"	"	"
1,2-Dichloropropane (78-87-5)	U		99.6	"	"	"
Bromodichloromethane (75-27-4)	U		99.6	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112010-11

Station ID: L-SD5-1

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.02 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		99.6	50	12/08/11	12/08/11
trans-1,3-Dichloropropene (10061-02-6)	U		99.6	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		99.6	"	"	"
Dibromochloromethane (124-48-1)	U		99.6	"	"	"
Bromoform (75-25-2)	U		99.6	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		249	"	"	"
Toluene (108-88-3)	U		99.6	"	"	"
Tetrachloroethene (127-18-4)	U		99.6	"	"	"
2-Hexanone (591-78-6)	U		249	"	"	"
1,2-Dibromoethane (106-93-4)	U		99.6	"	"	"
Chlorobenzene (108-90-7)	U		99.6	"	"	"
Ethylbenzene (100-41-4)	U		99.6	"	"	"
meta-/para-Xylene (na)	U		199	"	"	"
ortho-Xylene (95-47-6)	U		99.6	"	"	"
Styrene (100-42-5)	U		99.6	"	"	"
Isopropylbenzene (98-82-8)	U		99.6	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		99.6	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		99.6	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		99.6	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		99.6	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		249	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		249	"	"	"

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112010-12

Station ID: L-SD5-1 D

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.042 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	49.2		98.5	82-120	12/08/11	12/08/11
<i>Surr: Toluene-d8</i>	46.2		92.5	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	47.6		95.2	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		248	50	12/08/11	12/08/11
Chloromethane (74-87-3)	U		248	"	"	"
Vinyl chloride (75-01-4)	U		99.2	"	"	"
Bromomethane (74-83-9)	U		248	"	"	"
Chloroethane (75-00-3)	U		99.2	"	"	"
Trichlorofluoromethane (75-69-4)	U		99.2	"	"	"
1,1-Dichloroethene (75-35-4)	U		99.2	"	"	"
Carbon disulfide (75-15-0)	U		99.2	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		99.2	"	"	"
Acetone (67-64-1)	U		496	"	"	"
Methylene chloride (75-09-2)	U		99.2	"	"	"
Methyl acetate (79-20-9)	U		248	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		99.2	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		99.2	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		99.2	"	"	"
1,1-Dichloroethane (75-34-3)	U		99.2	"	"	"
2-Butanone (78-93-3)	U		248	"	"	"
Chloroform (67-66-3)	U		99.2	"	"	"
1,2-Dichloroethane (107-06-2)	U		99.2	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		99.2	"	"	"
Cyclohexane (110-82-7)	U		99.2	"	"	"
Carbon tetrachloride (56-23-5)	U		99.2	"	"	"
Benzene (71-43-2)	U		99.2	"	"	"
Trichloroethene (79-01-6)	U		99.2	"	"	"
Methylcyclohexane (108-87-2)	U		99.2	"	"	"
1,2-Dichloropropane (78-87-5)	U		99.2	"	"	"
Bromodichloromethane (75-27-4)	U		99.2	"	"	"



Environmental Protection Agency
Region 6 Laboratory

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112010-12

Station ID: L-SD5-1 D

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.042 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		99.2	50	12/08/11	12/08/11
trans-1,3-Dichloropropene (10061-02-6)	U		99.2	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		99.2	"	"	"
Dibromochloromethane (124-48-1)	U		99.2	"	"	"
Bromoform (75-25-2)	U		99.2	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		248	"	"	"
Toluene (108-88-3)	U		99.2	"	"	"
Tetrachloroethene (127-18-4)	U		99.2	"	"	"
2-Hexanone (591-78-6)	U		248	"	"	"
1,2-Dibromoethane (106-93-4)	U		99.2	"	"	"
Chlorobenzene (108-90-7)	U		99.2	"	"	"
Ethylbenzene (100-41-4)	U		99.2	"	"	"
meta-/para-Xylene (na)	U		198	"	"	"
ortho-Xylene (95-47-6)	U		99.2	"	"	"
Styrene (100-42-5)	U		99.2	"	"	"
Isopropylbenzene (98-82-8)	U		99.2	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		99.2	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		99.2	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		99.2	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		99.2	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		248	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		248	"	"	"

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112010-13

Station ID: N-SD5-1

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.094 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	49.7		99.5	82-120	12/08/11	12/08/11
<i>Surr: Toluene-d8</i>	46.2		92.4	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	46.0		92.1	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		245	50	12/08/11	12/08/11
Chloromethane (74-87-3)	U		245	"	"	"
Vinyl chloride (75-01-4)	U		98.2	"	"	"
Bromomethane (74-83-9)	U		245	"	"	"
Chloroethane (75-00-3)	U		98.2	"	"	"
Trichlorofluoromethane (75-69-4)	U		98.2	"	"	"
1,1-Dichloroethene (75-35-4)	U		98.2	"	"	"
Carbon disulfide (75-15-0)	U		98.2	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		98.2	"	"	"
Acetone (67-64-1)	U		491	"	"	"
Methylene chloride (75-09-2)	U		98.2	"	"	"
Methyl acetate (79-20-9)	U		245	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		98.2	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		98.2	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		98.2	"	"	"
1,1-Dichloroethane (75-34-3)	U		98.2	"	"	"
2-Butanone (78-93-3)	U		245	"	"	"
Chloroform (67-66-3)	U		98.2	"	"	"
1,2-Dichloroethane (107-06-2)	U		98.2	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		98.2	"	"	"
Cyclohexane (110-82-7)	U		98.2	"	"	"
Carbon tetrachloride (56-23-5)	U		98.2	"	"	"
Benzene (71-43-2)	U		98.2	"	"	"
Trichloroethene (79-01-6)	U		98.2	"	"	"
Methylcyclohexane (108-87-2)	U		98.2	"	"	"
1,2-Dichloropropane (78-87-5)	U		98.2	"	"	"
Bromodichloromethane (75-27-4)	U		98.2	"	"	"



Environmental Protection Agency
Region 6 Laboratory

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112010-13

Station ID: N-SD5-1

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.094 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		98.2	50	12/08/11	12/08/11
trans-1,3-Dichloropropene (10061-02-6)	U		98.2	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		98.2	"	"	"
Dibromochloromethane (124-48-1)	U		98.2	"	"	"
Bromoform (75-25-2)	U		98.2	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		245	"	"	"
Toluene (108-88-3)	U		98.2	"	"	"
Tetrachloroethene (127-18-4)	U		98.2	"	"	"
2-Hexanone (591-78-6)	U		245	"	"	"
1,2-Dibromoethane (106-93-4)	U		98.2	"	"	"
Chlorobenzene (108-90-7)	U		98.2	"	"	"
Ethylbenzene (100-41-4)	U		98.2	"	"	"
meta-/para-Xylene (na)	U		196	"	"	"
ortho-Xylene (95-47-6)	U		98.2	"	"	"
Styrene (100-42-5)	U		98.2	"	"	"
Isopropylbenzene (98-82-8)	U		98.2	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		98.2	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		98.2	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		98.2	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		98.2	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		245	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		245	"	"	"

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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112010-15

Station ID: TB-1

Batch: B1L1201

Date Collected: 12/05/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	10.6		106	81-124	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	10.2		102	86-115	"	"
<i>Surr: 4-Bromofluorobenzene</i>	9.72		97.2	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		0.5	1	12/09/11	12/09/11
Chloromethane (74-87-3)	U		0.5	"	"	"
Vinyl chloride (75-01-4)	U		0.5	"	"	"
Bromomethane (74-83-9)	U		0.5	"	"	"
Chloroethane (75-00-3)	U		0.5	"	"	"
Trichlorofluoromethane (75-69-4)	U		0.5	"	"	"
1,1-Dichloroethene (75-35-4)	U		0.5	"	"	"
Carbon disulfide (75-15-0)	U		0.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		0.5	"	"	"
Acetone (67-64-1)	U		5.0	"	"	"
Methylene chloride (75-09-2)	U		0.5	"	"	"
Methyl acetate (79-20-9)	U		0.5	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		0.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		0.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		0.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		0.5	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		0.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		0.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		0.5	"	"	"
Cyclohexane (110-82-7)	U		0.5	"	"	"
Carbon tetrachloride (56-23-5)	U		0.5	"	"	"
Benzene (71-43-2)	U		0.5	"	"	"
Trichloroethene (79-01-6)	U		0.5	"	"	"
Methylcyclohexane (108-87-2)	U		0.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		0.5	"	"	"
Bromodichloromethane (75-27-4)	U		0.5	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112010-15

Station ID: TB-1

Batch: B1L1201

Date Collected: 12/05/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		0.5	1	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		0.5	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		0.5	"	"	"
Dibromochloromethane (124-48-1)	U		0.5	"	"	"
Bromoform (75-25-2)	U		0.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	U		0.5	"	"	"
Tetrachloroethene (127-18-4)	U		0.5	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		0.5	"	"	"
Chlorobenzene (108-90-7)	U		0.5	"	"	"
Ethylbenzene (100-41-4)	U		0.5	"	"	"
meta-/para-Xylene (na)	U		1.0	"	"	"
ortho-Xylene (95-47-6)	U		0.5	"	"	"
Styrene (100-42-5)	U		0.5	"	"	"
Isopropylbenzene (98-82-8)	U		0.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"

This sample was received at pH 2.

Vinyl Chloride and Styrene may be biased low.

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-01

Station ID: B-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.111 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	49.0		97.9	82-120	12/08/11	12/08/11
<i>Surr: Toluene-d8</i>	45.3		90.6	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	46.1		92.2	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		245	50	12/08/11	12/08/11
Chloromethane (74-87-3)	U		245	"	"	"
Vinyl chloride (75-01-4)	U		97.8	"	"	"
Bromomethane (74-83-9)	U		245	"	"	"
Chloroethane (75-00-3)	U		97.8	"	"	"
Trichlorofluoromethane (75-69-4)	U		97.8	"	"	"
1,1-Dichloroethene (75-35-4)	U		97.8	"	"	"
Carbon disulfide (75-15-0)	U		97.8	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		97.8	"	"	"
Acetone (67-64-1)	U		489	"	"	"
Methylene chloride (75-09-2)	U		97.8	"	"	"
Methyl acetate (79-20-9)	U		245	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		97.8	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		97.8	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		97.8	"	"	"
1,1-Dichloroethane (75-34-3)	U		97.8	"	"	"
2-Butanone (78-93-3)	U		245	"	"	"
Chloroform (67-66-3)	U		97.8	"	"	"
1,2-Dichloroethane (107-06-2)	U		97.8	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		97.8	"	"	"
Cyclohexane (110-82-7)	U		97.8	"	"	"
Carbon tetrachloride (56-23-5)	U		97.8	"	"	"
Benzene (71-43-2)	U		97.8	"	"	"
Trichloroethene (79-01-6)	U		97.8	"	"	"
Methylcyclohexane (108-87-2)	U		97.8	"	"	"
1,2-Dichloropropane (78-87-5)	U		97.8	"	"	"
Bromodichloromethane (75-27-4)	U		97.8	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-01

Station ID: B-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.111 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		97.8	50	12/08/11	12/08/11
trans-1,3-Dichloropropene (10061-02-6)	U		97.8	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		97.8	"	"	"
Dibromochloromethane (124-48-1)	U		97.8	"	"	"
Bromoform (75-25-2)	U		97.8	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		245	"	"	"
Toluene (108-88-3)	U		97.8	"	"	"
Tetrachloroethene (127-18-4)	U		97.8	"	"	"
2-Hexanone (591-78-6)	U		245	"	"	"
1,2-Dibromoethane (106-93-4)	U		97.8	"	"	"
Chlorobenzene (108-90-7)	U		97.8	"	"	"
Ethylbenzene (100-41-4)	U		97.8	"	"	"
meta-/para-Xylene (na)	U		196	"	"	"
ortho-Xylene (95-47-6)	U		97.8	"	"	"
Styrene (100-42-5)	U		97.8	"	"	"
Isopropylbenzene (98-82-8)	U		97.8	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		97.8	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		97.8	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		97.8	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		97.8	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		245	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		245	"	"	"

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-02

Station ID: C-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.05 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	50.9		102	82-120	12/08/11	12/08/11
<i>Surr: Toluene-d8</i>	46.9		93.8	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	48.0		96.1	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		248	50	12/08/11	12/08/11
Chloromethane (74-87-3)	U		248	"	"	"
Vinyl chloride (75-01-4)	U		99.0	"	"	"
Bromomethane (74-83-9)	U		248	"	"	"
Chloroethane (75-00-3)	U		99.0	"	"	"
Trichlorofluoromethane (75-69-4)	U		99.0	"	"	"
1,1-Dichloroethene (75-35-4)	U		99.0	"	"	"
Carbon disulfide (75-15-0)	U		99.0	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		99.0	"	"	"
Acetone (67-64-1)	U		495	"	"	"
Methylene chloride (75-09-2)	U		99.0	"	"	"
Methyl acetate (79-20-9)	U		248	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		99.0	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		99.0	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		99.0	"	"	"
1,1-Dichloroethane (75-34-3)	U		99.0	"	"	"
2-Butanone (78-93-3)	U		248	"	"	"
Chloroform (67-66-3)	U		99.0	"	"	"
1,2-Dichloroethane (107-06-2)	U		99.0	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		99.0	"	"	"
Cyclohexane (110-82-7)	U		99.0	"	"	"
Carbon tetrachloride (56-23-5)	U		99.0	"	"	"
Benzene (71-43-2)	U		99.0	"	"	"
Trichloroethene (79-01-6)	U		99.0	"	"	"
Methylcyclohexane (108-87-2)	U		99.0	"	"	"
1,2-Dichloropropane (78-87-5)	U		99.0	"	"	"
Bromodichloromethane (75-27-4)	U		99.0	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-02

Station ID: C-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.05 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		99.0	50	12/08/11	12/08/11
trans-1,3-Dichloropropene (10061-02-6)	U		99.0	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		99.0	"	"	"
Dibromochloromethane (124-48-1)	U		99.0	"	"	"
Bromoform (75-25-2)	U		99.0	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		248	"	"	"
Toluene (108-88-3)	U		99.0	"	"	"
Tetrachloroethene (127-18-4)	U		99.0	"	"	"
2-Hexanone (591-78-6)	U		248	"	"	"
1,2-Dibromoethane (106-93-4)	U		99.0	"	"	"
Chlorobenzene (108-90-7)	U		99.0	"	"	"
Ethylbenzene (100-41-4)	U		99.0	"	"	"
meta-/para-Xylene (na)	U		198	"	"	"
ortho-Xylene (95-47-6)	U		99.0	"	"	"
Styrene (100-42-5)	U		99.0	"	"	"
Isopropylbenzene (98-82-8)	U		99.0	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		99.0	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		99.0	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		99.0	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		99.0	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		248	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		248	"	"	"

yph



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-03

Station ID: D-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.054 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	50.7		101	82-120	12/08/11	12/08/11
<i>Surr: Toluene-d8</i>	46.9		93.9	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	47.4		94.7	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		247	50	12/08/11	12/08/11
Chloromethane (74-87-3)	U		247	"	"	"
Vinyl chloride (75-01-4)	U		98.9	"	"	"
Bromomethane (74-83-9)	U		247	"	"	"
Chloroethane (75-00-3)	U		98.9	"	"	"
Trichlorofluoromethane (75-69-4)	U		98.9	"	"	"
1,1-Dichloroethene (75-35-4)	U		98.9	"	"	"
Carbon disulfide (75-15-0)	U		98.9	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		98.9	"	"	"
Acetone (67-64-1)	U		495	"	"	"
Methylene chloride (75-09-2)	U		98.9	"	"	"
Methyl acetate (79-20-9)	U		247	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		98.9	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		98.9	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		98.9	"	"	"
1,1-Dichloroethane (75-34-3)	U		98.9	"	"	"
2-Butanone (78-93-3)	U		247	"	"	"
Chloroform (67-66-3)	U		98.9	"	"	"
1,2-Dichloroethane (107-06-2)	U		98.9	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		98.9	"	"	"
Cyclohexane (110-82-7)	U		98.9	"	"	"
Carbon tetrachloride (56-23-5)	U		98.9	"	"	"
Benzene (71-43-2)	U		98.9	"	"	"
Trichloroethene (79-01-6)	U		98.9	"	"	"
Methylcyclohexane (108-87-2)	U		98.9	"	"	"
1,2-Dichloropropane (78-87-5)	U		98.9	"	"	"
Bromodichloromethane (75-27-4)	U		98.9	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-03

Station ID: D-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.054 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		98.9	50	12/08/11	12/08/11
trans-1,3-Dichloropropene (10061-02-6)	U		98.9	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		98.9	"	"	"
Dibromochloromethane (124-48-1)	U		98.9	"	"	"
Bromoform (75-25-2)	U		98.9	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		247	"	"	"
Toluene (108-88-3)	U		98.9	"	"	"
Tetrachloroethene (127-18-4)	U		98.9	"	"	"
2-Hexanone (591-78-6)	U		247	"	"	"
1,2-Dibromoethane (106-93-4)	U		98.9	"	"	"
Chlorobenzene (108-90-7)	U		98.9	"	"	"
Ethylbenzene (100-41-4)	U		98.9	"	"	"
meta-/para-Xylene (na)	U		198	"	"	"
ortho-Xylene (95-47-6)	U		98.9	"	"	"
Styrene (100-42-5)	U		98.9	"	"	"
Isopropylbenzene (98-82-8)	U		98.9	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		98.9	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		98.9	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		98.9	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		98.9	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		247	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		247	"	"	"

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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112013-03

Station ID: D-SD5-1

Batch: B1L0901

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.511 g

%Solids: 53.35

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	6,020		18.3	1	12/09/11	01/04/12
Barium (7440-39-3)	47.7		1.8	"	"	"
Beryllium (7440-41-7)	U		0.9	"	"	"
Cadmium (7440-43-9)	U		0.9	"	"	"
Calcium (7440-70-2)	1,150		27.5	"	"	"
Chromium (7440-47-3)	103	L	1.8	"	"	"
Cobalt (7440-48-4)	21.1	L	3.7	"	"	"
Copper (7440-50-8)	294	L	3.7	"	"	"
Iron (7439-89-6)	165,000		4.6	"	"	"
Magnesium (7439-95-4)	3,390		27.5	"	"	"
Manganese (7439-96-5)	681		0.9	"	"	"
Nickel (7440-02-2)	209	L	3.7	"	"	"
Potassium (7440-09-7)	2,760	K	183	"	"	"
Silver (7440-22-4)	U	L	1.8	"	"	"
Sodium (7440-23-5)	8,080		91.7	"	"	"
Vanadium (7440-62-2)	17.2		3.7	"	"	"
Zinc (7440-66-6)	49.2		3.7	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112013-03

Station ID: D-SD5-1

Batch: B1L0902

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.511 g

%Solids: 53.35

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	2.2	L	0.9	10	12/09/11	12/20/11
Arsenic (7440-38-2)	44.2	L	0.9	"	"	"
Lead (7439-92-1)	20.2		0.9	"	"	"
Selenium (7782-49-2)	U		0.9	"	"	"
Thallium (7440-28-0)	U		0.9	"	"	"

KD



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Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112013-03

Station ID: D-SD5-1

Batch: B1L1406

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.132 g

Sample Qualifiers:

% Solids: 53.35

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.114	1	12/15/11	12/16/11 sm



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-04

Station ID: E-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.106 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	49.8		99.7	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	46.7		93.4	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	48.9		97.8	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		245	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		245	"	"	"
Vinyl chloride (75-01-4)	U		97.9	"	"	"
Bromomethane (74-83-9)	U		245	"	"	"
Chloroethane (75-00-3)	U		97.9	"	"	"
Trichlorofluoromethane (75-69-4)	U		97.9	"	"	"
1,1-Dichloroethene (75-35-4)	U		97.9	"	"	"
Carbon disulfide (75-15-0)	U		97.9	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		97.9	"	"	"
Acetone (67-64-1)	U		490	"	"	"
Methylene chloride (75-09-2)	U		97.9	"	"	"
Methyl acetate (79-20-9)	U		245	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		97.9	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		97.9	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		97.9	"	"	"
1,1-Dichloroethane (75-34-3)	U		97.9	"	"	"
2-Butanone (78-93-3)	U		245	"	"	"
Chloroform (67-66-3)	U		97.9	"	"	"
1,2-Dichloroethane (107-06-2)	U		97.9	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		97.9	"	"	"
Cyclohexane (110-82-7)	U		97.9	"	"	"
Carbon tetrachloride (56-23-5)	U		97.9	"	"	"
Benzene (71-43-2)	U		97.9	"	"	"
Trichloroethene (79-01-6)	U		97.9	"	"	"
Methylcyclohexane (108-87-2)	U		97.9	"	"	"
1,2-Dichloropropane (78-87-5)	U		97.9	"	"	"
Bromodichloromethane (75-27-4)	U		97.9	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-04

Station ID: E-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.106 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		97.9	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		97.9	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		97.9	"	"	"
Dibromochloromethane (124-48-1)	U		97.9	"	"	"
Bromoform (75-25-2)	U		97.9	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		245	"	"	"
Toluene (108-88-3)	U		97.9	"	"	"
Tetrachloroethene (127-18-4)	U		97.9	"	"	"
2-Hexanone (591-78-6)	U		245	"	"	"
1,2-Dibromoethane (106-93-4)	U		97.9	"	"	"
Chlorobenzene (108-90-7)	U		97.9	"	"	"
Ethylbenzene (100-41-4)	U		97.9	"	"	"
meta-/para-Xylene (na)	U		196	"	"	"
ortho-Xylene (95-47-6)	U		97.9	"	"	"
Styrene (100-42-5)	U		97.9	"	"	"
Isopropylbenzene (98-82-8)	U		97.9	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		97.9	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		97.9	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		97.9	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		97.9	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		245	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		245	"	"	"

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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112013-04

Station ID: E-SD5-1

Batch: B1L0901

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.558 g

%Solids: 60.78

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	5,870		14.7	1	12/09/11	01/04/12
Barium (7440-39-3)	50.8		1.5	"	"	"
Beryllium (7440-41-7)	0.7		0.7	"	"	"
Cadmium (7440-43-9)	U		0.7	"	"	"
Calcium (7440-70-2)	1,920		22.1	"	"	"
Chromium (7440-47-3)	10.8		1.5	"	"	"
Cobalt (7440-48-4)	5.3		2.9	"	"	"
Copper (7440-50-8)	13.2		2.9	"	"	"
Iron (7439-89-6)	14,500		3.7	"	"	"
Magnesium (7439-95-4)	3,070		22.1	"	"	"
Manganese (7439-96-5)	949		0.7	"	"	"
Nickel (7440-02-2)	16.4		2.9	"	"	"
Potassium (7440-09-7)	2,610		147	"	"	"
Silver (7440-22-4)	U	L	1.5	"	"	"
Sodium (7440-23-5)	7,100		73.7	"	"	"
Vanadium (7440-62-2)	14.4		2.9	"	"	"
Zinc (7440-66-6)	34.9		2.9	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112013-04

Station ID: E-SD5-1

Batch: B1L0902

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.558 g

%Solids: 60.78

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.7	10	12/09/11	12/20/11
Arsenic (7440-38-2)	5.3		0.7	"	"	"
Lead (7439-92-1)	13.4		0.7	"	"	"
Selenium (7782-49-2)	U		0.7	"	"	"
Thallium (7440-28-0)	U		0.7	"	"	"

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Metals by CLP ILMO5.3 - CVAAS

Lab ID: 1112013-04

Station ID: E-SD5-1

Batch: B1L1406

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.182 g

%Solids: 60.78

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.072	1	12/15/11	12/16/11 sm

Metals by CLP ILMO5.3 - ICP

Lab ID: 1112013-05

Station ID: F-SD5-1

Batch: B1L0901

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.579 g

%Solids: 59.99

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	5,740		14.4	1	12/09/11	01/04/12
Barium (7440-39-3)	47.7		1.4	"	"	"
Beryllium (7440-41-7)	0.7		0.7	"	"	"
Cadmium (7440-43-9)	U		0.7	"	"	"
Calcium (7440-70-2)	38,700		21.6	"	"	"
Chromium (7440-47-3)	8.3		1.4	"	"	"
Cobalt (7440-48-4)	3.7		2.9	"	"	"
Copper (7440-50-8)	8.0		2.9	"	"	"
Iron (7439-89-6)	14,700		3.6	"	"	"
Magnesium (7439-95-4)	2,840		21.6	"	"	"
Manganese (7439-96-5)	127		0.7	"	"	"
Nickel (7440-02-2)	8.2		2.9	"	"	"
Potassium (7440-09-7)	2,660		144	"	"	"
Silver (7440-22-4)	U	L	1.4	"	"	"
Sodium (7440-23-5)	6,880		72.0	"	"	"
Vanadium (7440-62-2)	16.0		2.9	"	"	"
Zinc (7440-66-6)	37.2		2.9	"	"	"

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Metals by CLP ILM05.3 - ICP/MS

Lab ID: 1112013-05

Station ID: F-SD5-1

Batch: B1L0902

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.579 g

%Solids: 59.99

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.7	10	12/09/11	12/20/11
Arsenic (7440-38-2)	2.6		0.7	"	"	"
Lead (7439-92-1)	12.1		0.7	"	"	"
Selenium (7782-49-2)	U		0.7	"	"	"
Thallium (7440-28-0)	U		0.7	"	"	"

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Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112013-05

Station ID: F-SD5-1

Batch: B1L1406

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.187 g

%Solids: 59.99

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.071	1	12/15/11	12/16/11

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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112013-06

Station ID: G-SD5-1

Batch: B1L0901

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.582 g

Sample Qualifiers:

%Solids: 65.58

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	3,620		13.1	1	12/09/11	01/04/12
Barium (7440-39-3)	67.8		1.3	"	"	"
Beryllium (7440-41-7)	U		0.7	"	"	"
Cadmium (7440-43-9)	U		0.7	"	"	"
Calcium (7440-70-2)	3,190		19.7	"	"	"
Chromium (7440-47-3)	6.3		1.3	"	"	"
Cobalt (7440-48-4)	6.0		2.6	"	"	"
Copper (7440-50-8)	18.7		2.6	"	"	"
Iron (7439-89-6)	15,300		3.3	"	"	"
Magnesium (7439-95-4)	2,110		19.7	"	"	"
Manganese (7439-96-5)	1,090		0.7	"	"	"
Nickel (7440-02-2)	8.2		2.6	"	"	"
Potassium (7440-09-7)	1,410		131	"	"	"
Silver (7440-22-4)	U	L	1.3	"	"	"
Sodium (7440-23-5)	5,080		65.5	"	"	"
Vanadium (7440-62-2)	11.2		2.6	"	"	"
Zinc (7440-66-6)	74.1		2.6	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112013-06

Station ID: G-SD5-1

Batch: B1L0902

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.582 g

Sample Qualifiers:

%Solids: 65.58

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.7	10	12/09/11	12/20/11
Arsenic (7440-38-2)	6.2		0.7	"	"	"
Lead (7439-92-1)	15.9		0.7	"	"	"
Selenium (7782-49-2)	U		0.7	"	"	"
Thallium (7440-28-0)	U		0.7	"	"	"

KD



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Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112013-06

Station ID: G-SD5-1

Batch: B1L1406

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.177 g

Sample Qualifiers:

% Solids: 65.58

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.069	1	12/15/11	12/16/11 sm



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-07

Station ID: J-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.047 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	50.4		101	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	47.7		95.5	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	47.8		95.5	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		248	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		248	"	"	"
Vinyl chloride (75-01-4)	U		99.1	"	"	"
Bromomethane (74-83-9)	U		248	"	"	"
Chloroethane (75-00-3)	U		99.1	"	"	"
Trichlorofluoromethane (75-69-4)	U		99.1	"	"	"
1,1-Dichloroethene (75-35-4)	U		99.1	"	"	"
Carbon disulfide (75-15-0)	U		99.1	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		99.1	"	"	"
Acetone (67-64-1)	U		495	"	"	"
Methylene chloride (75-09-2)	U		99.1	"	"	"
Methyl acetate (79-20-9)	U		248	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		99.1	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		99.1	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		99.1	"	"	"
1,1-Dichloroethane (75-34-3)	U		99.1	"	"	"
2-Butanone (78-93-3)	U		248	"	"	"
Chloroform (67-66-3)	U		99.1	"	"	"
1,2-Dichloroethane (107-06-2)	U		99.1	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		99.1	"	"	"
Cyclohexane (110-82-7)	U		99.1	"	"	"
Carbon tetrachloride (56-23-5)	U		99.1	"	"	"
Benzene (71-43-2)	U		99.1	"	"	"
Trichloroethene (79-01-6)	U		99.1	"	"	"
Methylcyclohexane (108-87-2)	U		99.1	"	"	"
1,2-Dichloropropane (78-87-5)	U		99.1	"	"	"
Bromodichloromethane (75-27-4)	U		99.1	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-07

Station ID: J-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.047 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		99.1	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		99.1	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		99.1	"	"	"
Dibromochloromethane (124-48-1)	U		99.1	"	"	"
Bromoform (75-25-2)	U		99.1	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		248	"	"	"
Toluene (108-88-3)	U		99.1	"	"	"
Tetrachloroethene (127-18-4)	U		99.1	"	"	"
2-Hexanone (591-78-6)	U		248	"	"	"
1,2-Dibromoethane (106-93-4)	U		99.1	"	"	"
Chlorobenzene (108-90-7)	U		99.1	"	"	"
Ethylbenzene (100-41-4)	U		99.1	"	"	"
meta-/para-Xylene (na)	U		198	"	"	"
ortho-Xylene (95-47-6)	U		99.1	"	"	"
Styrene (100-42-5)	U		99.1	"	"	"
Isopropylbenzene (98-82-8)	U		99.1	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		99.1	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		99.1	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		99.1	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		99.1	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		248	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		248	"	"	"

yph



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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112013-07

Station ID: J-SD5-1

Batch: B1L0901

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.574 g

%Solids: 68.87

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	2,750		12.6	1	12/09/11	01/04/12
Barium (7440-39-3)	856		1.3	"	"	"
Beryllium (7440-41-7)	U		0.6	"	"	"
Cadmium (7440-43-9)	U		0.6	"	"	"
Calcium (7440-70-2)	1,360		19.0	"	"	"
Chromium (7440-47-3)	10.4		1.3	"	"	"
Cobalt (7440-48-4)	4.4		2.5	"	"	"
Copper (7440-50-8)	16.0		2.5	"	"	"
Iron (7439-89-6)	13,900		3.2	"	"	"
Magnesium (7439-95-4)	1,610		19.0	"	"	"
Manganese (7439-96-5)	273		0.6	"	"	"
Nickel (7440-02-2)	9.6		2.5	"	"	"
Potassium (7440-09-7)	1,070		126	"	"	"
Silver (7440-22-4)	U	L	1.3	"	"	"
Sodium (7440-23-5)	3,950		63.2	"	"	"
Vanadium (7440-62-2)	9.7		2.5	"	"	"
Zinc (7440-66-6)	181		2.5	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112013-07

Station ID: J-SD5-1

Batch: B1L0902

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.574 g

%Solids: 68.87

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.6	10	12/09/11	12/20/11
Arsenic (7440-38-2)	6.3		0.6	"	"	"
Lead (7439-92-1)	32.4		0.6	"	"	"
Selenium (7782-49-2)	U		0.6	"	"	"
Thallium (7440-28-0)	U		0.6	"	"	"

KD



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Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112013-07

Station ID: J-SD5-1

Batch: B1L1406

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.162 g

Sample Qualifiers:

% Solids: 68.87

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	2.90		0.717	10	12/15/11	12/16/11 sm



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-08

Station ID: K-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.028 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	51.4		103	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	48.6		97.1	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	48.5		97.1	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		249	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		249	"	"	"
Vinyl chloride (75-01-4)	U		99.4	"	"	"
Bromomethane (74-83-9)	U		249	"	"	"
Chloroethane (75-00-3)	U		99.4	"	"	"
Trichlorofluoromethane (75-69-4)	U		99.4	"	"	"
1,1-Dichloroethene (75-35-4)	U		99.4	"	"	"
Carbon disulfide (75-15-0)	U		99.4	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		99.4	"	"	"
Acetone (67-64-1)	U		497	"	"	"
Methylene chloride (75-09-2)	U		99.4	"	"	"
Methyl acetate (79-20-9)	U		249	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		99.4	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		99.4	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		99.4	"	"	"
1,1-Dichloroethane (75-34-3)	U		99.4	"	"	"
2-Butanone (78-93-3)	U		249	"	"	"
Chloroform (67-66-3)	U		99.4	"	"	"
1,2-Dichloroethane (107-06-2)	U		99.4	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		99.4	"	"	"
Cyclohexane (110-82-7)	U		99.4	"	"	"
Carbon tetrachloride (56-23-5)	U		99.4	"	"	"
Benzene (71-43-2)	U		99.4	"	"	"
Trichloroethene (79-01-6)	U		99.4	"	"	"
Methylcyclohexane (108-87-2)	U		99.4	"	"	"
1,2-Dichloropropane (78-87-5)	U		99.4	"	"	"
Bromodichloromethane (75-27-4)	U		99.4	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-08

Station ID: K-SD5-1

Batch: B1L1202

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 5.028 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		99.4	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		99.4	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		99.4	"	"	"
Dibromochloromethane (124-48-1)	U		99.4	"	"	"
Bromoform (75-25-2)	U		99.4	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		249	"	"	"
Toluene (108-88-3)	U		99.4	"	"	"
Tetrachloroethene (127-18-4)	U		99.4	"	"	"
2-Hexanone (591-78-6)	U		249	"	"	"
1,2-Dibromoethane (106-93-4)	U		99.4	"	"	"
Chlorobenzene (108-90-7)	U		99.4	"	"	"
Ethylbenzene (100-41-4)	U		99.4	"	"	"
meta-/para-Xylene (na)	U		199	"	"	"
ortho-Xylene (95-47-6)	U		99.4	"	"	"
Styrene (100-42-5)	U		99.4	"	"	"
Isopropylbenzene (98-82-8)	U		99.4	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		99.4	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		99.4	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		99.4	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		99.4	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		249	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		249	"	"	"

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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112013-08

Station ID: K-SD5-1

Batch: B1L0901

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.568 g

Sample Qualifiers:

%Solids: 65.38

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	3,190		13.5	1	12/09/11	01/04/12
Barium (7440-39-3)	114		1.3	"	"	"
Beryllium (7440-41-7)	U		0.7	"	"	"
Cadmium (7440-43-9)	U		0.7	"	"	"
Calcium (7440-70-2)	1,210		20.2	"	"	"
Chromium (7440-47-3)	5.7		1.3	"	"	"
Cobalt (7440-48-4)	4.6		2.7	"	"	"
Copper (7440-50-8)	11.0		2.7	"	"	"
Iron (7439-89-6)	9,030		3.4	"	"	"
Magnesium (7439-95-4)	2,020		20.2	"	"	"
Manganese (7439-96-5)	222		0.7	"	"	"
Nickel (7440-02-2)	7.7		2.7	"	"	"
Potassium (7440-09-7)	1,350		135	"	"	"
Silver (7440-22-4)	U	L	1.3	"	"	"
Sodium (7440-23-5)	5,240		67.3	"	"	"
Vanadium (7440-62-2)	10.6		2.7	"	"	"
Zinc (7440-66-6)	66.3		2.7	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112013-08

Station ID: K-SD5-1

Batch: B1L0902

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.568 g

Sample Qualifiers:

%Solids: 65.38

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.7	10	12/09/11	12/20/11
Arsenic (7440-38-2)	4.7		0.7	"	"	"
Lead (7439-92-1)	17.1		0.7	"	"	"
Selenium (7782-49-2)	U		0.7	"	"	"
Thallium (7440-28-0)	U		0.7	"	"	"

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Metals by CLP ILMO5.3 - CVAAS

Lab ID: 1112013-08

Station ID: K-SD5-1

Batch: B1L1406

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.145 g

Sample Qualifiers:

%Solids: 65.38

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.084	1	12/15/11	12/16/11 sm

Metals by CLP ILMO5.3 - ICP

Lab ID: 1112013-09

Station ID: L-SD5-1

Batch: B1L0901

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.594 g

Sample Qualifiers:

%Solids: 65.88

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	3,700		12.8	1	12/09/11	01/04/12
Barium (7440-39-3)	98.7		1.3	"	"	"
Beryllium (7440-41-7)	U		0.6	"	"	"
Cadmium (7440-43-9)	U		0.6	"	"	"
Calcium (7440-70-2)	3,650		19.2	"	"	"
Chromium (7440-47-3)	22.7		1.3	"	"	"
Cobalt (7440-48-4)	10.8		2.6	"	"	"
Copper (7440-50-8)	47.0		2.6	"	"	"
Iron (7439-89-6)	25,900		3.2	"	"	"
Magnesium (7439-95-4)	2,130		19.2	"	"	"
Manganese (7439-96-5)	2,780		0.6	"	"	"
Nickel (7440-02-2)	21.7		2.6	"	"	"
Potassium (7440-09-7)	1,580		128	"	"	"
Silver (7440-22-4)	U	L	1.3	"	"	"
Sodium (7440-23-5)	5,060		63.9	"	"	"
Vanadium (7440-62-2)	11.5		2.6	"	"	"
Zinc (7440-66-6)	59.5		2.6	"	"	"

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Metals by CLP ILM05.3 - ICP/MS

Lab ID: 1112013-09

Station ID: L-SD5-1

Batch: B1L0902

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.594 g

Sample Qualifiers:

%Solids: 65.88

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.6	10	12/09/11	12/20/11
Arsenic (7440-38-2)	13.9		0.6	"	"	"
Lead (7439-92-1)	17.4		0.6	"	"	"
Selenium (7782-49-2)	U		0.6	"	"	"
Thallium (7440-28-0)	U		0.6	"	"	"

KD

Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112013-09

Station ID: L-SD5-1

Batch: B1L1406

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.174 g

Sample Qualifiers:

%Solids: 65.88

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.070	1	12/15/11	12/16/11

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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112013-10

Station ID: L-SD5-1 D

Batch: B1L0901

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.591 g

%Solids: 66.79

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	4,460		12.7	1	12/09/11	01/04/12
Barium (7440-39-3)	35.0		1.3	"	"	"
Beryllium (7440-41-7)	U		0.6	"	"	"
Cadmium (7440-43-9)	U		0.6	"	"	"
Calcium (7440-70-2)	1,080		19.0	"	"	"
Chromium (7440-47-3)	8.2		1.3	"	"	"
Cobalt (7440-48-4)	4.9		2.5	"	"	"
Copper (7440-50-8)	12.7		2.5	"	"	"
Iron (7439-89-6)	14,700		3.2	"	"	"
Magnesium (7439-95-4)	2,430		19.0	"	"	"
Manganese (7439-96-5)	1,390		0.6	"	"	"
Nickel (7440-02-2)	9.0		2.5	"	"	"
Potassium (7440-09-7)	2,130		127	"	"	"
Silver (7440-22-4)	U	L	1.3	"	"	"
Sodium (7440-23-5)	5,910		63.3	"	"	"
Vanadium (7440-62-2)	10.1		2.5	"	"	"
Zinc (7440-66-6)	32.3		2.5	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112013-10

Station ID: L-SD5-1 D

Batch: B1L0902

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.591 g

%Solids: 66.79

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.6	10	12/09/11	12/20/11
Arsenic (7440-38-2)	9.1		0.6	"	"	"
Lead (7439-92-1)	11.1		0.6	"	"	"
Selenium (7782-49-2)	U		0.6	"	"	"
Thallium (7440-28-0)	U		0.6	"	"	"

KD



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Metals by CLP ILMO5.3 - CVAAS

Lab ID: 1112013-10

Station ID: L-SD5-1 D

Batch: B1L1406

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.153 g

Sample Qualifiers:

%Solids: 66.79

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.078	1	12/15/11	12/16/11 sm

Metals by CLP ILMO5.3 - ICP

Lab ID: 1112013-11

Station ID: N-SD5-1

Batch: B1L0901

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.572 g

Sample Qualifiers:

%Solids: 66.61

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	2,450		13.1	1	12/09/11	01/04/12
Barium (7440-39-3)	138		1.3	"	"	"
Beryllium (7440-41-7)	U		0.7	"	"	"
Cadmium (7440-43-9)	U		0.7	"	"	"
Calcium (7440-70-2)	2,360		19.7	"	"	"
Chromium (7440-47-3)	5.3		1.3	"	"	"
Cobalt (7440-48-4)	3.6		2.6	"	"	"
Copper (7440-50-8)	8.2		2.6	"	"	"
Iron (7439-89-6)	8,570		3.3	"	"	"
Magnesium (7439-95-4)	1,580		19.7	"	"	"
Manganese (7439-96-5)	295		0.7	"	"	"
Nickel (7440-02-2)	6.5		2.6	"	"	"
Potassium (7440-09-7)	1,060		131	"	"	"
Silver (7440-22-4)	U	L	1.3	"	"	"
Sodium (7440-23-5)	4,120		65.6	"	"	"
Vanadium (7440-62-2)	8.2		2.6	"	"	"
Zinc (7440-66-6)	45.2		2.6	"	"	"

ts



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Metals by CLP ILM05.3 - ICP/MS

Lab ID: 1112013-11

Station ID: N-SD5-1

Batch: B1L0902

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.572 g

Sample Qualifiers:

%Solids: 66.61

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.7	10	12/09/11	12/20/11
Arsenic (7440-38-2)	4.5		0.7	"	"	"
Lead (7439-92-1)	13.5		0.7	"	"	"
Selenium (7782-49-2)	U		0.7	"	"	"
Thallium (7440-28-0)	U		0.7	"	"	"

KD

Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112013-11

Station ID: N-SD5-1

Batch: B1L1406

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.178 g

Sample Qualifiers:

%Solids: 66.61

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.067	1	12/15/11	12/16/11

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-12

Station ID: O-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.095 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	50.1		100	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	47.7		95.4	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	47.5		95.0	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		245	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		245	"	"	"
Vinyl chloride (75-01-4)	U		98.1	"	"	"
Bromomethane (74-83-9)	U		245	"	"	"
Chloroethane (75-00-3)	U		98.1	"	"	"
Trichlorofluoromethane (75-69-4)	U		98.1	"	"	"
1,1-Dichloroethene (75-35-4)	U		98.1	"	"	"
Carbon disulfide (75-15-0)	U		98.1	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		98.1	"	"	"
Acetone (67-64-1)	U		491	"	"	"
Methylene chloride (75-09-2)	U		98.1	"	"	"
Methyl acetate (79-20-9)	U		245	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		98.1	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		98.1	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		98.1	"	"	"
1,1-Dichloroethane (75-34-3)	U		98.1	"	"	"
2-Butanone (78-93-3)	U		245	"	"	"
Chloroform (67-66-3)	U		98.1	"	"	"
1,2-Dichloroethane (107-06-2)	U		98.1	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		98.1	"	"	"
Cyclohexane (110-82-7)	U		98.1	"	"	"
Carbon tetrachloride (56-23-5)	U		98.1	"	"	"
Benzene (71-43-2)	U		98.1	"	"	"
Trichloroethene (79-01-6)	U		98.1	"	"	"
Methylcyclohexane (108-87-2)	U		98.1	"	"	"
1,2-Dichloropropane (78-87-5)	U		98.1	"	"	"
Bromodichloromethane (75-27-4)	U		98.1	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-12

Station ID: O-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.095 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		98.1	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		98.1	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		98.1	"	"	"
Dibromochloromethane (124-48-1)	U		98.1	"	"	"
Bromoform (75-25-2)	U		98.1	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		245	"	"	"
Toluene (108-88-3)	U		98.1	"	"	"
Tetrachloroethene (127-18-4)	U		98.1	"	"	"
2-Hexanone (591-78-6)	U		245	"	"	"
1,2-Dibromoethane (106-93-4)	U		98.1	"	"	"
Chlorobenzene (108-90-7)	U		98.1	"	"	"
Ethylbenzene (100-41-4)	U		98.1	"	"	"
meta-/para-Xylene (na)	U		196	"	"	"
ortho-Xylene (95-47-6)	U		98.1	"	"	"
Styrene (100-42-5)	U		98.1	"	"	"
Isopropylbenzene (98-82-8)	U		98.1	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		98.1	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		98.1	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		98.1	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		98.1	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		245	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		245	"	"	"

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-13

Station ID: O-SD5-1 D

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.062 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	51.7		103	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	49.0		98.1	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	48.6		97.3	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		247	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		247	"	"	"
Vinyl chloride (75-01-4)	U		98.8	"	"	"
Bromomethane (74-83-9)	U		247	"	"	"
Chloroethane (75-00-3)	U		98.8	"	"	"
Trichlorofluoromethane (75-69-4)	U		98.8	"	"	"
1,1-Dichloroethene (75-35-4)	U		98.8	"	"	"
Carbon disulfide (75-15-0)	U		98.8	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		98.8	"	"	"
Acetone (67-64-1)	U		494	"	"	"
Methylene chloride (75-09-2)	U		98.8	"	"	"
Methyl acetate (79-20-9)	U		247	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		98.8	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		98.8	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		98.8	"	"	"
1,1-Dichloroethane (75-34-3)	U		98.8	"	"	"
2-Butanone (78-93-3)	U		247	"	"	"
Chloroform (67-66-3)	U		98.8	"	"	"
1,2-Dichloroethane (107-06-2)	U		98.8	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		98.8	"	"	"
Cyclohexane (110-82-7)	U		98.8	"	"	"
Carbon tetrachloride (56-23-5)	U		98.8	"	"	"
Benzene (71-43-2)	U		98.8	"	"	"
Trichloroethene (79-01-6)	U		98.8	"	"	"
Methylcyclohexane (108-87-2)	U		98.8	"	"	"
1,2-Dichloropropane (78-87-5)	U		98.8	"	"	"
Bromodichloromethane (75-27-4)	U		98.8	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-13

Station ID: O-SD5-1 D

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.062 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		98.8	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		98.8	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		98.8	"	"	"
Dibromochloromethane (124-48-1)	U		98.8	"	"	"
Bromoform (75-25-2)	U		98.8	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		247	"	"	"
Toluene (108-88-3)	U		98.8	"	"	"
Tetrachloroethene (127-18-4)	U		98.8	"	"	"
2-Hexanone (591-78-6)	U		247	"	"	"
1,2-Dibromoethane (106-93-4)	U		98.8	"	"	"
Chlorobenzene (108-90-7)	U		98.8	"	"	"
Ethylbenzene (100-41-4)	U		98.8	"	"	"
meta-/para-Xylene (na)	U		198	"	"	"
ortho-Xylene (95-47-6)	U		98.8	"	"	"
Styrene (100-42-5)	U		98.8	"	"	"
Isopropylbenzene (98-82-8)	U		98.8	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		98.8	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		98.8	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		98.8	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		98.8	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		247	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		247	"	"	"

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-14

Station ID: P-SD5-1

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.173 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	51.6		103	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	48.9		97.8	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	48.4		96.9	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		242	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		242	"	"	"
Vinyl chloride (75-01-4)	U		96.7	"	"	"
Bromomethane (74-83-9)	U		242	"	"	"
Chloroethane (75-00-3)	U		96.7	"	"	"
Trichlorofluoromethane (75-69-4)	U		96.7	"	"	"
1,1-Dichloroethene (75-35-4)	U		96.7	"	"	"
Carbon disulfide (75-15-0)	U		96.7	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		96.7	"	"	"
Acetone (67-64-1)	U		483	"	"	"
Methylene chloride (75-09-2)	U		96.7	"	"	"
Methyl acetate (79-20-9)	U		242	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		96.7	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		96.7	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		96.7	"	"	"
1,1-Dichloroethane (75-34-3)	U		96.7	"	"	"
2-Butanone (78-93-3)	U		242	"	"	"
Chloroform (67-66-3)	U		96.7	"	"	"
1,2-Dichloroethane (107-06-2)	U		96.7	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		96.7	"	"	"
Cyclohexane (110-82-7)	U		96.7	"	"	"
Carbon tetrachloride (56-23-5)	U		96.7	"	"	"
Benzene (71-43-2)	U		96.7	"	"	"
Trichloroethene (79-01-6)	U		96.7	"	"	"
Methylcyclohexane (108-87-2)	U		96.7	"	"	"
1,2-Dichloropropane (78-87-5)	U		96.7	"	"	"
Bromodichloromethane (75-27-4)	U		96.7	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-14

Station ID: P-SD5-1

Batch: B1L1202

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 5.173 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		96.7	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		96.7	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		96.7	"	"	"
Dibromochloromethane (124-48-1)	U		96.7	"	"	"
Bromoform (75-25-2)	U		96.7	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		242	"	"	"
Toluene (108-88-3)	U		96.7	"	"	"
Tetrachloroethene (127-18-4)	U		96.7	"	"	"
2-Hexanone (591-78-6)	U		242	"	"	"
1,2-Dibromoethane (106-93-4)	U		96.7	"	"	"
Chlorobenzene (108-90-7)	U		96.7	"	"	"
Ethylbenzene (100-41-4)	U		96.7	"	"	"
meta-/para-Xylene (na)	U		193	"	"	"
ortho-Xylene (95-47-6)	U		96.7	"	"	"
Styrene (100-42-5)	U		96.7	"	"	"
Isopropylbenzene (98-82-8)	U		96.7	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		96.7	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		96.7	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		96.7	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		96.7	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		242	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		242	"	"	"

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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112013-14

Station ID: P-SD5-1

Batch: B1L0901

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.565 g

Sample Qualifiers:

%Solids: 69.48

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	2,830		12.7	1	12/09/11	01/04/12
Barium (7440-39-3)	45.7		1.3	"	"	"
Beryllium (7440-41-7)	U		0.6	"	"	"
Cadmium (7440-43-9)	U		0.6	"	"	"
Calcium (7440-70-2)	907		19.1	"	"	"
Chromium (7440-47-3)	4.8		1.3	"	"	"
Cobalt (7440-48-4)	3.7		2.5	"	"	"
Copper (7440-50-8)	7.5		2.5	"	"	"
Iron (7439-89-6)	11,000		3.2	"	"	"
Magnesium (7439-95-4)	1,710		19.1	"	"	"
Manganese (7439-96-5)	254		0.6	"	"	"
Nickel (7440-02-2)	6.1		2.5	"	"	"
Potassium (7440-09-7)	1,240		127	"	"	"
Silver (7440-22-4)	U	L	1.3	"	"	"
Sodium (7440-23-5)	4,040		63.7	"	"	"
Vanadium (7440-62-2)	9.1		2.5	"	"	"
Zinc (7440-66-6)	50.2		2.5	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112013-14

Station ID: P-SD5-1

Batch: B1L0902

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.565 g

Sample Qualifiers:

%Solids: 69.48

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.6	10	12/09/11	12/20/11
Arsenic (7440-38-2)	4.1		0.6	"	"	"
Lead (7439-92-1)	10.9		0.6	"	"	"
Selenium (7782-49-2)	U		0.6	"	"	"
Thallium (7440-28-0)	U		0.6	"	"	"

KD



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Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112013-14

Station ID: P-SD5-1

Batch: B1L1406

Date Collected: 12/05/11

Sample Type: Solid

Sample Weight: 0.192 g

Sample Qualifiers:

% Solids: 69.48

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.060	1	12/15/11	12/16/11 sm



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-15

Station ID: Q-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.101 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	51.0		102	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	48.1		96.1	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	46.9		93.8	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		245	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		245	"	"	"
Vinyl chloride (75-01-4)	U		98.0	"	"	"
Bromomethane (74-83-9)	U		245	"	"	"
Chloroethane (75-00-3)	U		98.0	"	"	"
Trichlorofluoromethane (75-69-4)	U		98.0	"	"	"
1,1-Dichloroethene (75-35-4)	U		98.0	"	"	"
Carbon disulfide (75-15-0)	U		98.0	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		98.0	"	"	"
Acetone (67-64-1)	U		490	"	"	"
Methylene chloride (75-09-2)	U		98.0	"	"	"
Methyl acetate (79-20-9)	U		245	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		98.0	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		98.0	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		98.0	"	"	"
1,1-Dichloroethane (75-34-3)	U		98.0	"	"	"
2-Butanone (78-93-3)	U		245	"	"	"
Chloroform (67-66-3)	U		98.0	"	"	"
1,2-Dichloroethane (107-06-2)	U		98.0	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		98.0	"	"	"
Cyclohexane (110-82-7)	U		98.0	"	"	"
Carbon tetrachloride (56-23-5)	U		98.0	"	"	"
Benzene (71-43-2)	U		98.0	"	"	"
Trichloroethene (79-01-6)	U		98.0	"	"	"
Methylcyclohexane (108-87-2)	U		98.0	"	"	"
1,2-Dichloropropane (78-87-5)	U		98.0	"	"	"
Bromodichloromethane (75-27-4)	U		98.0	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112013-15

Station ID: Q-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.101 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		98.0	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		98.0	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		98.0	"	"	"
Dibromochloromethane (124-48-1)	U		98.0	"	"	"
Bromoform (75-25-2)	U		98.0	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		245	"	"	"
Toluene (108-88-3)	U		98.0	"	"	"
Tetrachloroethene (127-18-4)	U		98.0	"	"	"
2-Hexanone (591-78-6)	U		245	"	"	"
1,2-Dibromoethane (106-93-4)	U		98.0	"	"	"
Chlorobenzene (108-90-7)	U		98.0	"	"	"
Ethylbenzene (100-41-4)	U		98.0	"	"	"
meta-/para-Xylene (na)	U		196	"	"	"
ortho-Xylene (95-47-6)	U		98.0	"	"	"
Styrene (100-42-5)	U		98.0	"	"	"
Isopropylbenzene (98-82-8)	U		98.0	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		98.0	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		98.0	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		98.0	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		98.0	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		245	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		245	"	"	"

yph



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112013-16

Station ID: TB-2

Batch: B1L1201

Date Collected: 12/06/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	10.4		104	81-124	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	10.1		101	86-115	"	"
<i>Surr: 4-Bromofluorobenzene</i>	9.72		97.2	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		0.5	1	12/09/11	12/09/11
Chloromethane (74-87-3)	U		0.5	"	"	"
Vinyl chloride (75-01-4)	U		0.5	"	"	"
Bromomethane (74-83-9)	U		0.5	"	"	"
Chloroethane (75-00-3)	U		0.5	"	"	"
Trichlorofluoromethane (75-69-4)	U		0.5	"	"	"
1,1-Dichloroethene (75-35-4)	U		0.5	"	"	"
Carbon disulfide (75-15-0)	U		0.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		0.5	"	"	"
Acetone (67-64-1)	U		5.0	"	"	"
Methylene chloride (75-09-2)	U		0.5	"	"	"
Methyl acetate (79-20-9)	U		0.5	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		0.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		0.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		0.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		0.5	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		0.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		0.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		0.5	"	"	"
Cyclohexane (110-82-7)	U		0.5	"	"	"
Carbon tetrachloride (56-23-5)	U		0.5	"	"	"
Benzene (71-43-2)	U		0.5	"	"	"
Trichloroethene (79-01-6)	U		0.5	"	"	"
Methylcyclohexane (108-87-2)	U		0.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		0.5	"	"	"
Bromodichloromethane (75-27-4)	U		0.5	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112013-16

Station ID: TB-2

Batch: B1L1201

Date Collected: 12/06/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		0.5	1	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		0.5	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		0.5	"	"	"
Dibromochloromethane (124-48-1)	U		0.5	"	"	"
Bromoform (75-25-2)	U		0.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	U		0.5	"	"	"
Tetrachloroethene (127-18-4)	U		0.5	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		0.5	"	"	"
Chlorobenzene (108-90-7)	U		0.5	"	"	"
Ethylbenzene (100-41-4)	U		0.5	"	"	"
meta-/para-Xylene (na)	U		1.0	"	"	"
ortho-Xylene (95-47-6)	U		0.5	"	"	"
Styrene (100-42-5)	U		0.5	"	"	"
Isopropylbenzene (98-82-8)	U		0.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"

This sample was received at pH 2.

Vinyl Chloride and Styrene may be biased low.

ng



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112013-17

Station ID: TB-3

Batch: B1L1201

Date Collected: 12/07/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	10.3		103	81-124	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	10.2		102	86-115	"	"
<i>Surr: 4-Bromofluorobenzene</i>	9.52		95.2	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		0.5	1	12/09/11	12/09/11
Chloromethane (74-87-3)	U		0.5	"	"	"
Vinyl chloride (75-01-4)	U		0.5	"	"	"
Bromomethane (74-83-9)	U		0.5	"	"	"
Chloroethane (75-00-3)	U		0.5	"	"	"
Trichlorofluoromethane (75-69-4)	U		0.5	"	"	"
1,1-Dichloroethene (75-35-4)	U		0.5	"	"	"
Carbon disulfide (75-15-0)	U		0.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		0.5	"	"	"
Acetone (67-64-1)	U		5.0	"	"	"
Methylene chloride (75-09-2)	U		0.5	"	"	"
Methyl acetate (79-20-9)	U		0.5	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		0.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		0.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		0.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		0.5	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		0.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		0.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		0.5	"	"	"
Cyclohexane (110-82-7)	U		0.5	"	"	"
Carbon tetrachloride (56-23-5)	U		0.5	"	"	"
Benzene (71-43-2)	U		0.5	"	"	"
Trichloroethene (79-01-6)	U		0.5	"	"	"
Methylcyclohexane (108-87-2)	U		0.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		0.5	"	"	"
Bromodichloromethane (75-27-4)	U		0.5	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112013-17

Station ID: TB-3

Batch: B1L1201

Date Collected: 12/07/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		0.5	1	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		0.5	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		0.5	"	"	"
Dibromochloromethane (124-48-1)	U		0.5	"	"	"
Bromoform (75-25-2)	U		0.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	U		0.5	"	"	"
Tetrachloroethene (127-18-4)	U		0.5	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		0.5	"	"	"
Chlorobenzene (108-90-7)	U		0.5	"	"	"
Ethylbenzene (100-41-4)	U		0.5	"	"	"
meta-/para-Xylene (na)	U		1.0	"	"	"
ortho-Xylene (95-47-6)	U		0.5	"	"	"
Styrene (100-42-5)	U		0.5	"	"	"
Isopropylbenzene (98-82-8)	U		0.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"

This sample was received at pH 2.

Vinyl Chloride and Styrene may be biased low.

ng



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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-01

Station ID: ER-1

Batch: B1L1203

Date Collected: 12/05/11

Sample Type: Liquid

Sample Volume: 50 ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	U		100	1	12/12/11	01/06/12
Barium (7440-39-3)	U		10.0	"	"	"
Beryllium (7440-41-7)	U		5.0	"	"	"
Cadmium (7440-43-9)	U		5.0	"	"	"
Calcium (7440-70-2)	U		150	"	"	"
Chromium (7440-47-3)	U		10.0	"	"	"
Cobalt (7440-48-4)	U		20.0	"	"	"
Copper (7440-50-8)	U		20.0	"	"	"
Iron (7439-89-6)	U		25.0	"	"	"
Magnesium (7439-95-4)	U		150	"	"	"
Manganese (7439-96-5)	U		5.0	"	"	"
Nickel (7440-02-2)	U		20.0	"	"	"
Potassium (7440-09-7)	U		1,000	"	"	"
Silver (7440-22-4)	U		10.0	"	"	"
Sodium (7440-23-5)	U		500	"	"	"
Vanadium (7440-62-2)	U		20.0	"	"	"
Zinc (7440-66-6)	U		20.0	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112015-01

Station ID: ER-1

Batch: B1L1204

Date Collected: 12/05/11

Sample Type: Liquid

Sample Volume: 50 ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		2.0	4	12/12/11	12/20/11
Arsenic (7440-38-2)	U		2.0	"	"	"
Lead (7439-92-1)	U		2.0	"	"	"
Selenium (7782-49-2)	U		2.0	"	"	"
Thallium (7440-28-0)	U		2.0	"	"	"

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Metals by CLP ILMO5.3 - CVAAS

Lab ID: 1112015-01

Station ID: ER-1

Batch: B1L2001

Date Collected: 12/05/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.200	1	12/19/11	12/20/11 sm

Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-02

Station ID: ER-2

Batch: B1L1203

Date Collected: 12/06/11

Sample Type: Liquid

Sample Volume: 50 ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	U		100	1	12/12/11	01/06/12
Barium (7440-39-3)	U		10.0	"	"	"
Beryllium (7440-41-7)	U		5.0	"	"	"
Cadmium (7440-43-9)	U		5.0	"	"	"
Calcium (7440-70-2)	U		150	"	"	"
Chromium (7440-47-3)	U		10.0	"	"	"
Cobalt (7440-48-4)	U		20.0	"	"	"
Copper (7440-50-8)	U		20.0	"	"	"
Iron (7439-89-6)	U		25.0	"	"	"
Magnesium (7439-95-4)	U		150	"	"	"
Manganese (7439-96-5)	U		5.0	"	"	"
Nickel (7440-02-2)	U		20.0	"	"	"
Potassium (7440-09-7)	U		1,000	"	"	"
Silver (7440-22-4)	U		10.0	"	"	"
Sodium (7440-23-5)	U		500	"	"	"
Vanadium (7440-62-2)	U		20.0	"	"	"
Zinc (7440-66-6)	U		20.0	"	"	"

ts



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Metals by CLP ILM05.3 - ICP/MS

Lab ID: 1112015-02

Station ID: ER-2

Batch: B1L1204

Date Collected: 12/06/11

Sample Type: Liquid

Sample Volume: 50 ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		2.0	4	12/12/11	12/20/11
Arsenic (7440-38-2)	U		2.0	"	"	"
Lead (7439-92-1)	U		2.0	"	"	"
Selenium (7782-49-2)	U		2.0	"	"	"
Thallium (7440-28-0)	U		2.0	"	"	"

KD

Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112015-02

Station ID: ER-2

Batch: B1L2001

Date Collected: 12/06/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.200	1	12/19/11	12/20/11

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Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112015-03

Station ID: ER-3

Batch: B1L1201

Date Collected: 12/07/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	10.2		102	81-124	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	10.4		104	86-115	"	"
<i>Surr: 4-Bromofluorobenzene</i>	9.40		94.0	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		0.5	1	12/09/11	12/09/11
Chloromethane (74-87-3)	U		0.5	"	"	"
Vinyl chloride (75-01-4)	U		0.5	"	"	"
Bromomethane (74-83-9)	U		0.5	"	"	"
Chloroethane (75-00-3)	U		0.5	"	"	"
Trichlorofluoromethane (75-69-4)	U		0.5	"	"	"
1,1-Dichloroethene (75-35-4)	U		0.5	"	"	"
Carbon disulfide (75-15-0)	U		0.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		0.5	"	"	"
Acetone (67-64-1)	U		5.0	"	"	"
Methylene chloride (75-09-2)	U		0.5	"	"	"
Methyl acetate (79-20-9)	U		0.5	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		0.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		0.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		0.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		0.5	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		0.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		0.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		0.5	"	"	"
Cyclohexane (110-82-7)	U		0.5	"	"	"
Carbon tetrachloride (56-23-5)	U		0.5	"	"	"
Benzene (71-43-2)	U		0.5	"	"	"
Trichloroethene (79-01-6)	U		0.5	"	"	"
Methylcyclohexane (108-87-2)	U		0.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		0.5	"	"	"
Bromodichloromethane (75-27-4)	U		0.5	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112015-03

Station ID: ER-3

Batch: B1L1201

Date Collected: 12/07/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		0.5	1	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		0.5	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		0.5	"	"	"
Dibromochloromethane (124-48-1)	U		0.5	"	"	"
Bromoform (75-25-2)	U		0.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	U		0.5	"	"	"
Tetrachloroethene (127-18-4)	U		0.5	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		0.5	"	"	"
Chlorobenzene (108-90-7)	U		0.5	"	"	"
Ethylbenzene (100-41-4)	U		0.5	"	"	"
meta-/para-Xylene (na)	U		1.0	"	"	"
ortho-Xylene (95-47-6)	U		0.5	"	"	"
Styrene (100-42-5)	U		0.5	"	"	"
Isopropylbenzene (98-82-8)	U		0.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"

This sample was received at pH 2.

Vinyl Chloride and Styrene may be biased low.

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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-03

Station ID: ER-3

Batch: B1L1203

Date Collected: 12/07/11

Sample Type: Liquid

Sample Volume: 50 ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	U		100	1	12/12/11	01/06/12
Barium (7440-39-3)	U		10.0	"	"	"
Beryllium (7440-41-7)	U		5.0	"	"	"
Cadmium (7440-43-9)	U		5.0	"	"	"
Calcium (7440-70-2)	U		150	"	"	"
Chromium (7440-47-3)	U		10.0	"	"	"
Cobalt (7440-48-4)	U		20.0	"	"	"
Copper (7440-50-8)	U		20.0	"	"	"
Iron (7439-89-6)	U		25.0	"	"	"
Magnesium (7439-95-4)	U		150	"	"	"
Manganese (7439-96-5)	U		5.0	"	"	"
Nickel (7440-02-2)	U		20.0	"	"	"
Potassium (7440-09-7)	U		1,000	"	"	"
Silver (7440-22-4)	U		10.0	"	"	"
Sodium (7440-23-5)	U		500	"	"	"
Vanadium (7440-62-2)	U		20.0	"	"	"
Zinc (7440-66-6)	U		20.0	"	"	"

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Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112015-03

Station ID: ER-3

Batch: B1L1204

Date Collected: 12/07/11

Sample Type: Liquid

Sample Volume: 50 ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		2.0	4	12/12/11	12/20/11
Arsenic (7440-38-2)	U		2.0	"	"	"
Lead (7439-92-1)	U		2.0	"	"	"
Selenium (7782-49-2)	U		2.0	"	"	"
Thallium (7440-28-0)	U		2.0	"	"	"

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Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112015-03

Station ID: ER-3

Batch: B1L2001

Date Collected: 12/07/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.200	1	12/19/11	12/20/11 sm



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112015-04

Station ID: FB-3

Batch: B1L1201

Date Collected: 12/07/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	10.5		105	81-124	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	10.4		104	86-115	"	"
<i>Surr: 4-Bromofluorobenzene</i>	9.23		92.3	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		0.5	1	12/09/11	12/09/11
Chloromethane (74-87-3)	U		0.5	"	"	"
Vinyl chloride (75-01-4)	U		0.5	"	"	"
Bromomethane (74-83-9)	U		0.5	"	"	"
Chloroethane (75-00-3)	U		0.5	"	"	"
Trichlorofluoromethane (75-69-4)	U		0.5	"	"	"
1,1-Dichloroethene (75-35-4)	U		0.5	"	"	"
Carbon disulfide (75-15-0)	U		0.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		0.5	"	"	"
Acetone (67-64-1)	U		5.0	"	"	"
Methylene chloride (75-09-2)	U		0.5	"	"	"
Methyl acetate (79-20-9)	U		0.5	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		0.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		0.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		0.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		0.5	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		0.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		0.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		0.5	"	"	"
Cyclohexane (110-82-7)	U		0.5	"	"	"
Carbon tetrachloride (56-23-5)	U		0.5	"	"	"
Benzene (71-43-2)	U		0.5	"	"	"
Trichloroethene (79-01-6)	U		0.5	"	"	"
Methylcyclohexane (108-87-2)	U		0.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		0.5	"	"	"
Bromodichloromethane (75-27-4)	U		0.5	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112015-04

Station ID: FB-3

Batch: B1L1201

Date Collected: 12/07/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		0.5	1	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		0.5	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		0.5	"	"	"
Dibromochloromethane (124-48-1)	U		0.5	"	"	"
Bromoform (75-25-2)	U		0.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	0.7		0.5	"	"	"
Tetrachloroethene (127-18-4)	U		0.5	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		0.5	"	"	"
Chlorobenzene (108-90-7)	U		0.5	"	"	"
Ethylbenzene (100-41-4)	U		0.5	"	"	"
meta-/para-Xylene (na)	U		1.0	"	"	"
ortho-Xylene (95-47-6)	U		0.5	"	"	"
Styrene (100-42-5)	U		0.5	"	"	"
Isopropylbenzene (98-82-8)	U		0.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"

This sample was received at pH 2.

Vinyl Chloride and Styrene may be biased low.

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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112015-05

Station ID: A-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.302 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	51.7		103	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	49.2		98.5	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	48.9		97.7	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		236	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		236	"	"	"
Vinyl chloride (75-01-4)	U		94.3	"	"	"
Bromomethane (74-83-9)	U		236	"	"	"
Chloroethane (75-00-3)	U		94.3	"	"	"
Trichlorofluoromethane (75-69-4)	U		94.3	"	"	"
1,1-Dichloroethene (75-35-4)	U		94.3	"	"	"
Carbon disulfide (75-15-0)	U		94.3	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		94.3	"	"	"
Acetone (67-64-1)	U		472	"	"	"
Methylene chloride (75-09-2)	U		94.3	"	"	"
Methyl acetate (79-20-9)	U		236	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		94.3	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		94.3	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		94.3	"	"	"
1,1-Dichloroethane (75-34-3)	U		94.3	"	"	"
2-Butanone (78-93-3)	U		236	"	"	"
Chloroform (67-66-3)	U		94.3	"	"	"
1,2-Dichloroethane (107-06-2)	U		94.3	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		94.3	"	"	"
Cyclohexane (110-82-7)	U		94.3	"	"	"
Carbon tetrachloride (56-23-5)	U		94.3	"	"	"
Benzene (71-43-2)	U		94.3	"	"	"
Trichloroethene (79-01-6)	U		94.3	"	"	"
Methylcyclohexane (108-87-2)	U		94.3	"	"	"
1,2-Dichloropropane (78-87-5)	U		94.3	"	"	"
Bromodichloromethane (75-27-4)	U		94.3	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112015-05

Station ID: A-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.302 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		94.3	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		94.3	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		94.3	"	"	"
Dibromochloromethane (124-48-1)	U		94.3	"	"	"
Bromoform (75-25-2)	U		94.3	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		236	"	"	"
Toluene (108-88-3)	U		94.3	"	"	"
Tetrachloroethene (127-18-4)	U		94.3	"	"	"
2-Hexanone (591-78-6)	U		236	"	"	"
1,2-Dibromoethane (106-93-4)	U		94.3	"	"	"
Chlorobenzene (108-90-7)	U		94.3	"	"	"
Ethylbenzene (100-41-4)	U		94.3	"	"	"
meta-/para-Xylene (na)	U		189	"	"	"
ortho-Xylene (95-47-6)	U		94.3	"	"	"
Styrene (100-42-5)	U		94.3	"	"	"
Isopropylbenzene (98-82-8)	U		94.3	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		94.3	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		94.3	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		94.3	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		94.3	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		236	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		236	"	"	"

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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-05

Station ID: A-SD5-1

Batch: B1L1402

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.573 g

Sample Qualifiers:

%Solids: 60.12

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	4,730		14.5	1	12/15/11	01/05/12
Barium (7440-39-3)	222		1.5	"	"	"
Beryllium (7440-41-7)	U		0.7	"	"	"
Cadmium (7440-43-9)	U		0.7	"	"	"
Calcium (7440-70-2)	2,020		21.8	"	"	"
Chromium (7440-47-3)	9.0		1.5	"	"	"
Cobalt (7440-48-4)	5.4		2.9	"	"	"
Copper (7440-50-8)	16.2		2.9	"	"	"
Iron (7439-89-6)	13,800		3.6	"	"	"
Magnesium (7439-95-4)	2,540		21.8	"	"	"
Manganese (7439-96-5)	634		0.7	"	"	"
Nickel (7440-02-2)	9.1		2.9	"	"	"
Potassium (7440-09-7)	1,640		145	"	"	"
Silver (7440-22-4)	U		1.5	"	"	"
Sodium (7440-23-5)	6,190		72.6	"	"	"
Vanadium (7440-62-2)	14.0		2.9	"	"	"
Zinc (7440-66-6)	83.2		2.9	"	"	"

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Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112015-05

Station ID: A-SD5-1

Batch: B1L1403

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.573 g

Sample Qualifiers:

%Solids: 60.12

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.7	10	12/15/11	12/20/11
Arsenic (7440-38-2)	5.9		0.7	"	"	"
Lead (7439-92-1)	23.0		0.7	"	"	"
Selenium (7782-49-2)	U		0.7	"	"	"
Thallium (7440-28-0)	U		0.7	"	"	"

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Metals by CLP ILMO5.3 - CVAAS

Lab ID: 1112015-05

Station ID: A-SD5-1

Batch: B1L1406

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.193 g

Sample Qualifiers:

%Solids: 60.12

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.069	1	12/15/11	12/16/11 sm

Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-06

Station ID: B-SD5-1

Batch: B1L1402

Date Collected: 12/08/11

Sample Type: Solid

Sample Weight: 0.538 g

Sample Qualifiers:

%Solids: 64.63

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	4,190		14.4	1	12/15/11	01/05/12
Barium (7440-39-3)	59.0		1.4	"	"	"
Beryllium (7440-41-7)	U		0.7	"	"	"
Cadmium (7440-43-9)	U		0.7	"	"	"
Calcium (7440-70-2)	1,730		21.6	"	"	"
Chromium (7440-47-3)	7.9		1.4	"	"	"
Cobalt (7440-48-4)	4.1		2.9	"	"	"
Copper (7440-50-8)	15.4		2.9	"	"	"
Iron (7439-89-6)	13,100		3.6	"	"	"
Magnesium (7439-95-4)	2,010		21.6	"	"	"
Manganese (7439-96-5)	187		0.7	"	"	"
Nickel (7440-02-2)	9.7		2.9	"	"	"
Potassium (7440-09-7)	1,570		144	"	"	"
Silver (7440-22-4)	U		1.4	"	"	"
Sodium (7440-23-5)	5,140		71.9	"	"	"
Vanadium (7440-62-2)	11.4		2.9	"	"	"
Zinc (7440-66-6)	141		2.9	"	"	"

ts



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Metals by CLP ILM05.3 - ICP/MS

Lab ID: 1112015-06

Station ID: B-SD5-1

Batch: B1L1403

Date Collected: 12/08/11

Sample Type: Solid

Sample Weight: 0.538 g

%Solids: 64.63

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.7	10	12/15/11	12/20/11
Arsenic (7440-38-2)	4.9		0.7	"	"	"
Lead (7439-92-1)	26.2		0.7	"	"	"
Selenium (7782-49-2)	U		0.7	"	"	"
Thallium (7440-28-0)	U		0.7	"	"	"

KD

Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112015-06

Station ID: B-SD5-1

Batch: B1L1406

Date Collected: 12/08/11

Sample Type: Solid

Sample Weight: 0.181 g

%Solids: 64.63

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.068	1	12/15/11	12/16/11

sm



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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-07

Station ID: C-SD5-1

Batch: B1L1402

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.512 g

Sample Qualifiers:

%Solids: 54.17

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	10,600		18.0	1	12/15/11	01/05/12
Barium (7440-39-3)	66.6		1.8	"	"	"
Beryllium (7440-41-7)	1.0		0.9	"	"	"
Cadmium (7440-43-9)	U		0.9	"	"	"
Calcium (7440-70-2)	1,180		27.0	"	"	"
Chromium (7440-47-3)	12.6		1.8	"	"	"
Cobalt (7440-48-4)	6.3		3.6	"	"	"
Copper (7440-50-8)	8.1		3.6	"	"	"
Iron (7439-89-6)	13,900		4.5	"	"	"
Magnesium (7439-95-4)	4,650		27.0	"	"	"
Manganese (7439-96-5)	115		0.9	"	"	"
Nickel (7440-02-2)	12.6		3.6	"	"	"
Potassium (7440-09-7)	3,860		180	"	"	"
Silver (7440-22-4)	U		1.8	"	"	"
Sodium (7440-23-5)	9,250		90.1	"	"	"
Vanadium (7440-62-2)	22.1		3.6	"	"	"
Zinc (7440-66-6)	46.5		3.6	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112015-07

Station ID: C-SD5-1

Batch: B1L1403

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.512 g

Sample Qualifiers:

%Solids: 54.17

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.9	10	12/15/11	12/20/11
Arsenic (7440-38-2)	5.0		0.9	"	"	"
Lead (7439-92-1)	12.6		0.9	"	"	"
Selenium (7782-49-2)	U		0.9	"	"	"
Thallium (7440-28-0)	U		0.9	"	"	"

KD



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Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112015-07

Station ID: C-SD5-1

Batch: B1L1406

Date Collected: 12/06/11

Sample Type: Solid

Sample Weight: 0.142 g

Sample Qualifiers:

% Solids: 54.17

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.104	1	12/15/11	12/16/11 sm



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112015-08

Station ID: H-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.312 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	51.2		102	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	48.3		96.6	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	48.0		96.0	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		235	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		235	"	"	"
Vinyl chloride (75-01-4)	U		94.1	"	"	"
Bromomethane (74-83-9)	U		235	"	"	"
Chloroethane (75-00-3)	U		94.1	"	"	"
Trichlorofluoromethane (75-69-4)	U		94.1	"	"	"
1,1-Dichloroethene (75-35-4)	U		94.1	"	"	"
Carbon disulfide (75-15-0)	U		94.1	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		94.1	"	"	"
Acetone (67-64-1)	U		471	"	"	"
Methylene chloride (75-09-2)	U		94.1	"	"	"
Methyl acetate (79-20-9)	U		235	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		94.1	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		94.1	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		94.1	"	"	"
1,1-Dichloroethane (75-34-3)	U		94.1	"	"	"
2-Butanone (78-93-3)	U		235	"	"	"
Chloroform (67-66-3)	U		94.1	"	"	"
1,2-Dichloroethane (107-06-2)	U		94.1	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		94.1	"	"	"
Cyclohexane (110-82-7)	U		94.1	"	"	"
Carbon tetrachloride (56-23-5)	U		94.1	"	"	"
Benzene (71-43-2)	U		94.1	"	"	"
Trichloroethene (79-01-6)	U		94.1	"	"	"
Methylcyclohexane (108-87-2)	U		94.1	"	"	"
1,2-Dichloropropane (78-87-5)	U		94.1	"	"	"
Bromodichloromethane (75-27-4)	U		94.1	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112015-08

Station ID: H-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.312 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		94.1	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		94.1	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		94.1	"	"	"
Dibromochloromethane (124-48-1)	U		94.1	"	"	"
Bromoform (75-25-2)	U		94.1	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		235	"	"	"
Toluene (108-88-3)	U		94.1	"	"	"
Tetrachloroethene (127-18-4)	U		94.1	"	"	"
2-Hexanone (591-78-6)	U		235	"	"	"
1,2-Dibromoethane (106-93-4)	U		94.1	"	"	"
Chlorobenzene (108-90-7)	U		94.1	"	"	"
Ethylbenzene (100-41-4)	U		94.1	"	"	"
meta-/para-Xylene (na)	U		188	"	"	"
ortho-Xylene (95-47-6)	U		94.1	"	"	"
Styrene (100-42-5)	U		94.1	"	"	"
Isopropylbenzene (98-82-8)	U		94.1	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		94.1	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		94.1	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		94.1	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		94.1	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		235	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		235	"	"	"

yph



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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-08

Station ID: H-SD5-1

Batch: B1L1402

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.531 g

Sample Qualifiers:

%Solids: 70.44

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	3,160		13.4	1	12/15/11	01/05/12
Barium (7440-39-3)	90.4		1.3	"	"	"
Beryllium (7440-41-7)	U		0.7	"	"	"
Cadmium (7440-43-9)	U		0.7	"	"	"
Calcium (7440-70-2)	19,900	L	20.1	"	"	"
Chromium (7440-47-3)	13.0		1.3	"	"	"
Cobalt (7440-48-4)	4.5		2.7	"	"	"
Copper (7440-50-8)	22.4	K	2.7	"	"	"
Iron (7439-89-6)	18,200		3.3	"	"	"
Magnesium (7439-95-4)	1,880		20.1	"	"	"
Manganese (7439-96-5)	308	L	0.7	"	"	"
Nickel (7440-02-2)	8.7		2.7	"	"	"
Potassium (7440-09-7)	1,220		134	"	"	"
Silver (7440-22-4)	U		1.3	"	"	"
Sodium (7440-23-5)	4,770		66.8	"	"	"
Vanadium (7440-62-2)	10.6		2.7	"	"	"
Zinc (7440-66-6)	181	L	2.7	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112015-08

Station ID: H-SD5-1

Batch: B1L1403

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.531 g

Sample Qualifiers:

%Solids: 70.44

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U	L	0.7	10	12/15/11	12/20/11
Arsenic (7440-38-2)	6.5		0.7	"	"	"
Lead (7439-92-1)	53.0	K	0.7	"	"	"
Selenium (7782-49-2)	U		0.7	"	"	"
Thallium (7440-28-0)	U		0.7	"	"	"

KD



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Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112015-08

Station ID: H-SD5-1

Batch: B1L1406

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.176 g

Sample Qualifiers:

% Solids: 70.44

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.065	1	12/15/11	12/16/11 sm



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112015-10

Station ID: M-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.186 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	51.5		103	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	49.1		98.1	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	48.6		97.2	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		241	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		241	"	"	"
Vinyl chloride (75-01-4)	U		96.4	"	"	"
Bromomethane (74-83-9)	U		241	"	"	"
Chloroethane (75-00-3)	U		96.4	"	"	"
Trichlorofluoromethane (75-69-4)	U		96.4	"	"	"
1,1-Dichloroethene (75-35-4)	U		96.4	"	"	"
Carbon disulfide (75-15-0)	U		96.4	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		96.4	"	"	"
Acetone (67-64-1)	U		482	"	"	"
Methylene chloride (75-09-2)	U		96.4	"	"	"
Methyl acetate (79-20-9)	U		241	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		96.4	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		96.4	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		96.4	"	"	"
1,1-Dichloroethane (75-34-3)	U		96.4	"	"	"
2-Butanone (78-93-3)	U		241	"	"	"
Chloroform (67-66-3)	U		96.4	"	"	"
1,2-Dichloroethane (107-06-2)	U		96.4	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		96.4	"	"	"
Cyclohexane (110-82-7)	U		96.4	"	"	"
Carbon tetrachloride (56-23-5)	U		96.4	"	"	"
Benzene (71-43-2)	U		96.4	"	"	"
Trichloroethene (79-01-6)	U		96.4	"	"	"
Methylcyclohexane (108-87-2)	U		96.4	"	"	"
1,2-Dichloropropane (78-87-5)	U		96.4	"	"	"
Bromodichloromethane (75-27-4)	U		96.4	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112015-10

Station ID: M-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.186 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		96.4	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		96.4	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		96.4	"	"	"
Dibromochloromethane (124-48-1)	U		96.4	"	"	"
Bromoform (75-25-2)	U		96.4	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		241	"	"	"
Toluene (108-88-3)	U		96.4	"	"	"
Tetrachloroethene (127-18-4)	U		96.4	"	"	"
2-Hexanone (591-78-6)	U		241	"	"	"
1,2-Dibromoethane (106-93-4)	U		96.4	"	"	"
Chlorobenzene (108-90-7)	U		96.4	"	"	"
Ethylbenzene (100-41-4)	U		96.4	"	"	"
meta-/para-Xylene (na)	U		193	"	"	"
ortho-Xylene (95-47-6)	U		96.4	"	"	"
Styrene (100-42-5)	U		96.4	"	"	"
Isopropylbenzene (98-82-8)	U		96.4	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		96.4	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		96.4	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		96.4	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		96.4	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		241	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		241	"	"	"

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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-10

Station ID: M-SD5-1

Batch: B1L1402

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.55 g

Sample Qualifiers:

%Solids: 42.40

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	9,380		21.4	1	12/15/11	01/05/12
Barium (7440-39-3)	152		2.1	"	"	"
Beryllium (7440-41-7)	U		1.1	"	"	"
Cadmium (7440-43-9)	U		1.1	"	"	"
Calcium (7440-70-2)	2,470		32.2	"	"	"
Chromium (7440-47-3)	22.0		2.1	"	"	"
Cobalt (7440-48-4)	7.9		4.3	"	"	"
Copper (7440-50-8)	17.6		4.3	"	"	"
Iron (7439-89-6)	16,800		5.4	"	"	"
Magnesium (7439-95-4)	5,290		32.2	"	"	"
Manganese (7439-96-5)	520		1.1	"	"	"
Nickel (7440-02-2)	14.4		4.3	"	"	"
Potassium (7440-09-7)	3,380		214	"	"	"
Silver (7440-22-4)	U		2.1	"	"	"
Sodium (7440-23-5)	12,300		107	"	"	"
Vanadium (7440-62-2)	25.0		4.3	"	"	"
Zinc (7440-66-6)	93.3		4.3	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112015-10

Station ID: M-SD5-1

Batch: B1L1403

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.55 g

Sample Qualifiers:

%Solids: 42.40

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		1.1	10	12/15/11	12/20/11
Arsenic (7440-38-2)	6.3		1.1	"	"	"
Lead (7439-92-1)	31.2		1.1	"	"	"
Selenium (7782-49-2)	U		1.1	"	"	"
Thallium (7440-28-0)	U		1.1	"	"	"

KD



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Metals by CLP ILMO5.3 - CVAAS

Lab ID: 1112015-10

Station ID: M-SD5-1

Batch: B1L1406
Sample Type: Solid

Date Collected: 12/07/11
Sample Weight: 0.166 g
%Solids: 42.40

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.114	1	12/15/11	12/16/11 sm

Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-11

Station ID: O-SD5-1

Batch: B1L1402
Sample Type: Solid

Date Collected: 12/07/11
Sample Weight: 0.513 g
%Solids: 58.44

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	5,500		16.7	1	12/15/11	01/05/12
Barium (7440-39-3)	131		1.7	"	"	"
Beryllium (7440-41-7)	U		0.8	"	"	"
Cadmium (7440-43-9)	U		0.8	"	"	"
Calcium (7440-70-2)	1,790		25.0	"	"	"
Chromium (7440-47-3)	9.5		1.7	"	"	"
Cobalt (7440-48-4)	5.2		3.3	"	"	"
Copper (7440-50-8)	13.3		3.3	"	"	"
Iron (7439-89-6)	13,100		4.2	"	"	"
Magnesium (7439-95-4)	2,830		25.0	"	"	"
Manganese (7439-96-5)	492		0.8	"	"	"
Nickel (7440-02-2)	9.1		3.3	"	"	"
Potassium (7440-09-7)	1,890		167	"	"	"
Silver (7440-22-4)	U		1.7	"	"	"
Sodium (7440-23-5)	6,910		83.4	"	"	"
Vanadium (7440-62-2)	15.3		3.3	"	"	"
Zinc (7440-66-6)	58.2		3.3	"	"	"

ts



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Metals by CLP ILM05.3 - ICP/MS

Lab ID: 1112015-11

Station ID: O-SD5-1

Batch: B1L1403

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.513 g

Sample Qualifiers:

%Solids: 58.44

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.8	10	12/15/11	12/20/11
Arsenic (7440-38-2)	6.5		0.8	"	"	"
Lead (7439-92-1)	18.2		0.8	"	"	"
Selenium (7782-49-2)	U		0.8	"	"	"
Thallium (7440-28-0)	U		0.8	"	"	"

KD

Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112015-11

Station ID: O-SD5-1

Batch: B1L1406

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.178 g

Sample Qualifiers:

%Solids: 58.44

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.077	1	12/15/11	12/16/11

sm



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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-12

Station ID: O-SD5-1 D

Batch: B1L1402

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.53 g

Sample Qualifiers:

%Solids: 59.74

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	4,790		15.8	1	12/15/11	01/05/12
Barium (7440-39-3)	148		1.6	"	"	"
Beryllium (7440-41-7)	U		0.8	"	"	"
Cadmium (7440-43-9)	U		0.8	"	"	"
Calcium (7440-70-2)	1,640		23.7	"	"	"
Chromium (7440-47-3)	8.1		1.6	"	"	"
Cobalt (7440-48-4)	4.9		3.2	"	"	"
Copper (7440-50-8)	14.3		3.2	"	"	"
Iron (7439-89-6)	12,800		3.9	"	"	"
Magnesium (7439-95-4)	2,530		23.7	"	"	"
Manganese (7439-96-5)	506		0.8	"	"	"
Nickel (7440-02-2)	8.8		3.2	"	"	"
Potassium (7440-09-7)	1,640		158	"	"	"
Silver (7440-22-4)	U		1.6	"	"	"
Sodium (7440-23-5)	6,440		79.0	"	"	"
Vanadium (7440-62-2)	13.6		3.2	"	"	"
Zinc (7440-66-6)	78.4		3.2	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112015-12

Station ID: O-SD5-1 D

Batch: B1L1403

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.53 g

Sample Qualifiers:

%Solids: 59.74

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.8	10	12/15/11	12/20/11
Arsenic (7440-38-2)	6.7		0.8	"	"	"
Lead (7439-92-1)	21.4		0.8	"	"	"
Selenium (7782-49-2)	U		0.8	"	"	"
Thallium (7440-28-0)	U		0.8	"	"	"

KD



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Metals by CLP ILMO5.3 - CVAAS

Lab ID: 1112015-12

Station ID: O-SD5-1 D

Batch: B1L1406

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.186 g

Sample Qualifiers:

%Solids: 59.74

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.072	1	12/15/11	12/16/11 sm

Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-13

Station ID: Q-SD5-1

Batch: B1L1402

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.54 g

Sample Qualifiers:

%Solids: 45.39

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	7,850		20.4	1	12/15/11	01/05/12
Barium (7440-39-3)	134		2.0	"	"	"
Beryllium (7440-41-7)	U		1.0	"	"	"
Cadmium (7440-43-9)	U		1.0	"	"	"
Calcium (7440-70-2)	2,260		30.6	"	"	"
Chromium (7440-47-3)	11.7		2.0	"	"	"
Cobalt (7440-48-4)	7.4		4.1	"	"	"
Copper (7440-50-8)	12.7		4.1	"	"	"
Iron (7439-89-6)	15,000		5.1	"	"	"
Magnesium (7439-95-4)	4,680		30.6	"	"	"
Manganese (7439-96-5)	661		1.0	"	"	"
Nickel (7440-02-2)	12.3		4.1	"	"	"
Potassium (7440-09-7)	3,190		204	"	"	"
Silver (7440-22-4)	U		2.0	"	"	"
Sodium (7440-23-5)	11,400		102	"	"	"
Vanadium (7440-62-2)	22.1		4.1	"	"	"
Zinc (7440-66-6)	62.3		4.1	"	"	"

ts



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Metals by CLP ILM05.3 - ICP/MS

Lab ID: 1112015-13

Station ID: Q-SD5-1

Batch: B1L1403

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.54 g

Sample Qualifiers:

%Solids: 45.39

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		1.0	10	12/15/11	12/20/11
Arsenic (7440-38-2)	4.9		1.0	"	"	"
Lead (7439-92-1)	17.0		1.0	"	"	"
Selenium (7782-49-2)	U		1.0	"	"	"
Thallium (7440-28-0)	U		1.0	"	"	"

KD

Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112015-13

Station ID: Q-SD5-1

Batch: B1L1406

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.137 g

Sample Qualifiers:

%Solids: 45.39

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.129	1	12/15/11	12/16/11

sm



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112015-14

Station ID: R-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.395 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	53.7		107	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	51.2		102	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	50.3		101	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		232	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		232	"	"	"
Vinyl chloride (75-01-4)	U		92.7	"	"	"
Bromomethane (74-83-9)	U		232	"	"	"
Chloroethane (75-00-3)	U		92.7	"	"	"
Trichlorofluoromethane (75-69-4)	U		92.7	"	"	"
1,1-Dichloroethene (75-35-4)	U		92.7	"	"	"
Carbon disulfide (75-15-0)	U		92.7	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		92.7	"	"	"
Acetone (67-64-1)	U		463	"	"	"
Methylene chloride (75-09-2)	U		92.7	"	"	"
Methyl acetate (79-20-9)	U		232	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		92.7	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		92.7	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		92.7	"	"	"
1,1-Dichloroethane (75-34-3)	U		92.7	"	"	"
2-Butanone (78-93-3)	U		232	"	"	"
Chloroform (67-66-3)	U		92.7	"	"	"
1,2-Dichloroethane (107-06-2)	U		92.7	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		92.7	"	"	"
Cyclohexane (110-82-7)	U		92.7	"	"	"
Carbon tetrachloride (56-23-5)	U		92.7	"	"	"
Benzene (71-43-2)	U		92.7	"	"	"
Trichloroethene (79-01-6)	U		92.7	"	"	"
Methylcyclohexane (108-87-2)	U		92.7	"	"	"
1,2-Dichloropropane (78-87-5)	U		92.7	"	"	"
Bromodichloromethane (75-27-4)	U		92.7	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112015-14

Station ID: R-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.395 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		92.7	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		92.7	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		92.7	"	"	"
Dibromochloromethane (124-48-1)	U		92.7	"	"	"
Bromoform (75-25-2)	U		92.7	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		232	"	"	"
Toluene (108-88-3)	U		92.7	"	"	"
Tetrachloroethene (127-18-4)	U		92.7	"	"	"
2-Hexanone (591-78-6)	U		232	"	"	"
1,2-Dibromoethane (106-93-4)	U		92.7	"	"	"
Chlorobenzene (108-90-7)	U		92.7	"	"	"
Ethylbenzene (100-41-4)	U		92.7	"	"	"
meta-/para-Xylene (na)	U		185	"	"	"
ortho-Xylene (95-47-6)	U		92.7	"	"	"
Styrene (100-42-5)	U		92.7	"	"	"
Isopropylbenzene (98-82-8)	U		92.7	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		92.7	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		92.7	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		92.7	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		92.7	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		232	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		232	"	"	"

yph



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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-14

Station ID: R-SD5-1

Batch: B1L1402

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.524 g

Sample Qualifiers:

%Solids: 46.79

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	7,270		20.4	1	12/15/11	01/05/12
Barium (7440-39-3)	200		2.0	"	"	"
Beryllium (7440-41-7)	U		1.0	"	"	"
Cadmium (7440-43-9)	U		1.0	"	"	"
Calcium (7440-70-2)	2,430		30.6	"	"	"
Chromium (7440-47-3)	11.2		2.0	"	"	"
Cobalt (7440-48-4)	6.7		4.1	"	"	"
Copper (7440-50-8)	13.8		4.1	"	"	"
Iron (7439-89-6)	13,900		5.1	"	"	"
Magnesium (7439-95-4)	4,070		30.6	"	"	"
Manganese (7439-96-5)	451		1.0	"	"	"
Nickel (7440-02-2)	10.8		4.1	"	"	"
Potassium (7440-09-7)	2,610		204	"	"	"
Silver (7440-22-4)	U		2.0	"	"	"
Sodium (7440-23-5)	8,910		102	"	"	"
Vanadium (7440-62-2)	19.5		4.1	"	"	"
Zinc (7440-66-6)	69.5		4.1	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112015-14

Station ID: R-SD5-1

Batch: B1L1403

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.524 g

Sample Qualifiers:

%Solids: 46.79

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		1.0	10	12/15/11	12/20/11
Arsenic (7440-38-2)	4.6		1.0	"	"	"
Lead (7439-92-1)	19.7		1.0	"	"	"
Selenium (7782-49-2)	U		1.0	"	"	"
Thallium (7440-28-0)	U		1.0	"	"	"

KD



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Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112015-14

Station ID: R-SD5-1

Batch: B1L1406

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.179 g

Sample Qualifiers:

% Solids: 46.79

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.096	1	12/15/11	12/16/11 sm



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112015-15

Station ID: S-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.2 g

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	51.3		103	82-120	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	48.5		97.0	81-116	"	"
<i>Surr: 4-Bromofluorobenzene</i>	48.6		97.3	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		240	50	12/09/11	12/09/11
Chloromethane (74-87-3)	U		240	"	"	"
Vinyl chloride (75-01-4)	U		96.2	"	"	"
Bromomethane (74-83-9)	U		240	"	"	"
Chloroethane (75-00-3)	U		96.2	"	"	"
Trichlorofluoromethane (75-69-4)	U		96.2	"	"	"
1,1-Dichloroethene (75-35-4)	U		96.2	"	"	"
Carbon disulfide (75-15-0)	U		96.2	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		96.2	"	"	"
Acetone (67-64-1)	U		481	"	"	"
Methylene chloride (75-09-2)	U		96.2	"	"	"
Methyl acetate (79-20-9)	U		240	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		96.2	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		96.2	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		96.2	"	"	"
1,1-Dichloroethane (75-34-3)	U		96.2	"	"	"
2-Butanone (78-93-3)	U		240	"	"	"
Chloroform (67-66-3)	U		96.2	"	"	"
1,2-Dichloroethane (107-06-2)	U		96.2	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		96.2	"	"	"
Cyclohexane (110-82-7)	U		96.2	"	"	"
Carbon tetrachloride (56-23-5)	U		96.2	"	"	"
Benzene (71-43-2)	U		96.2	"	"	"
Trichloroethene (79-01-6)	U		96.2	"	"	"
Methylcyclohexane (108-87-2)	U		96.2	"	"	"
1,2-Dichloropropane (78-87-5)	U		96.2	"	"	"
Bromodichloromethane (75-27-4)	U		96.2	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS

Lab ID: 1112015-15

Station ID: S-SD5-1

Batch: B1L1202

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 5.2 g

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		96.2	50	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		96.2	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		96.2	"	"	"
Dibromochloromethane (124-48-1)	U		96.2	"	"	"
Bromoform (75-25-2)	U		96.2	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		240	"	"	"
Toluene (108-88-3)	U		96.2	"	"	"
Tetrachloroethene (127-18-4)	U		96.2	"	"	"
2-Hexanone (591-78-6)	U		240	"	"	"
1,2-Dibromoethane (106-93-4)	U		96.2	"	"	"
Chlorobenzene (108-90-7)	U		96.2	"	"	"
Ethylbenzene (100-41-4)	U		96.2	"	"	"
meta-/para-Xylene (na)	U		192	"	"	"
ortho-Xylene (95-47-6)	U		96.2	"	"	"
Styrene (100-42-5)	U		96.2	"	"	"
Isopropylbenzene (98-82-8)	U		96.2	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		96.2	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		96.2	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		96.2	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		96.2	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		240	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		240	"	"	"

yph



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Metals by CLP ILMO5.3 - ICP

Lab ID: 1112015-15

Station ID: S-SD5-1

Batch: B1L1402

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.526 g

Sample Qualifiers:

%Solids: 57.21

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	4,240		16.6	1	12/15/11	01/05/12
Barium (7440-39-3)	299		1.7	"	"	"
Beryllium (7440-41-7)	U		0.8	"	"	"
Cadmium (7440-43-9)	U		0.8	"	"	"
Calcium (7440-70-2)	1,560		24.9	"	"	"
Chromium (7440-47-3)	7.9		1.7	"	"	"
Cobalt (7440-48-4)	5.6		3.3	"	"	"
Copper (7440-50-8)	11.9		3.3	"	"	"
Iron (7439-89-6)	11,900		4.2	"	"	"
Magnesium (7439-95-4)	2,350		24.9	"	"	"
Manganese (7439-96-5)	311		0.8	"	"	"
Nickel (7440-02-2)	8.7		3.3	"	"	"
Potassium (7440-09-7)	1,610		166	"	"	"
Silver (7440-22-4)	U		1.7	"	"	"
Sodium (7440-23-5)	5,290		83.1	"	"	"
Vanadium (7440-62-2)	13.2		3.3	"	"	"
Zinc (7440-66-6)	63.6		3.3	"	"	"

ts

Metals by CLP ILMO5.3 - ICP/MS

Lab ID: 1112015-15

Station ID: S-SD5-1

Batch: B1L1403

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.526 g

Sample Qualifiers:

%Solids: 57.21

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.8	10	12/15/11	12/20/11
Arsenic (7440-38-2)	5.3		0.8	"	"	"
Lead (7439-92-1)	19.8		0.8	"	"	"
Selenium (7782-49-2)	U		0.8	"	"	"
Thallium (7440-28-0)	U		0.8	"	"	"

KD



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Metals by CLP ILM05.3 - CVAAS

Lab ID: 1112015-15

Station ID: S-SD5-1

Batch: B1L1406

Date Collected: 12/07/11

Sample Type: Solid

Sample Weight: 0.165 g

Sample Qualifiers:

% Solids: 57.21

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.085	1	12/15/11	12/16/11 sm



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112015-16

Station ID: TB-4

Batch: B1L1201

Date Collected: 12/08/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Surrogates

Analyte	Result µg/l	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	10.5		105	81-124	12/09/11	12/09/11
<i>Surr: Toluene-d8</i>	10.1		101	86-115	"	"
<i>Surr: 4-Bromofluorobenzene</i>	9.40		94.0	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		0.5	1	12/09/11	12/09/11
Chloromethane (74-87-3)	U		0.5	"	"	"
Vinyl chloride (75-01-4)	U		0.5	"	"	"
Bromomethane (74-83-9)	U		0.5	"	"	"
Chloroethane (75-00-3)	U		0.5	"	"	"
Trichlorofluoromethane (75-69-4)	U		0.5	"	"	"
1,1-Dichloroethene (75-35-4)	U		0.5	"	"	"
Carbon disulfide (75-15-0)	U		0.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		0.5	"	"	"
Acetone (67-64-1)	U		5.0	"	"	"
Methylene chloride (75-09-2)	U		0.5	"	"	"
Methyl acetate (79-20-9)	U		0.5	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		0.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		0.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		0.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		0.5	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		0.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		0.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		0.5	"	"	"
Cyclohexane (110-82-7)	U		0.5	"	"	"
Carbon tetrachloride (56-23-5)	U		0.5	"	"	"
Benzene (71-43-2)	U		0.5	"	"	"
Trichloroethene (79-01-6)	U		0.5	"	"	"
Methylcyclohexane (108-87-2)	U		0.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		0.5	"	"	"
Bromodichloromethane (75-27-4)	U		0.5	"	"	"



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Volatiles by CLP OLM04.2 - GC/MS (Low Level)

Lab ID: 1112015-16

Station ID: TB-4

Batch: B1L1201

Date Collected: 12/08/11

Sample Type: Liquid

Sample Volume: 25 ml

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/l	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
cis-1,3-Dichloropropene (10061-01-5)	U		0.5	1	12/09/11	12/09/11
trans-1,3-Dichloropropene (10061-02-6)	U		0.5	"	"	"
1,1,2-Trichloroethane (79-00-5)	U		0.5	"	"	"
Dibromochloromethane (124-48-1)	U		0.5	"	"	"
Bromoform (75-25-2)	U		0.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	U		0.5	"	"	"
Tetrachloroethene (127-18-4)	U		0.5	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		0.5	"	"	"
Chlorobenzene (108-90-7)	U		0.5	"	"	"
Ethylbenzene (100-41-4)	U		0.5	"	"	"
meta-/para-Xylene (na)	U		1.0	"	"	"
ortho-Xylene (95-47-6)	U		0.5	"	"	"
Styrene (100-42-5)	U		0.5	"	"	"
Isopropylbenzene (98-82-8)	U		0.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"

This sample was received at pH 2.

Vinyl Chloride and Styrene may be biased low.

ng



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Percent Solids - Quality Control

Duplicate (B1L1311-DUP1)

Source: 1112013-14

Prepared: 12/13/2011 Analyzed: 12/13/2011

Targets

ANALYTE	Result %	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	RPD RPD Limit
% Solids	68.87			69.48	0.89 20



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Percent Solids - Quality Control

Duplicate (B1L1405-DUP1)

Source: 1112015-15

Prepared: 12/14/2011 Analyzed: 12/15/2011

Targets

ANALYTE	Result %	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	RPD RPD Limit
% Solids	60.88				57.21	6.21 20



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

Blank (B1L1202-BLK1)

Prepared: 12/8/2011 Analyzed: 12/8/2011

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC Limits
<i>Surr: 1,2-Dichloroethane-d4</i>	47.9		50.0	95.8 82-120
<i>Surr: Toluene-d8</i>	46.9		50.0	93.8 81-116
<i>Surr: 4-Bromofluorobenzene</i>	43.5		50.0	87.0 80-116

Blank (B1L1202-BLK1)

Prepared: 12/8/2011 Analyzed: 12/8/2011

Targets

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit
Dichlorodifluoromethane	U	250
Chloromethane	U	250
Vinyl chloride	U	99.8
Bromomethane	U	250
Chloroethane	U	99.8
Trichlorofluoromethane	U	99.8
1,1-Dichloroethene	U	99.8
Carbon disulfide	U	99.8
1,1,2-Trichloro-1,2,2-trifluoroethane	U	99.8
Acetone	U	499
Methylene chloride	U	99.8
Methyl acetate	U	250
trans-1,2-Dichloroethene	U	99.8
cis-1,2-Dichloroethene	U	99.8
Methyl tert-butyl ether	U	99.8
1,1-Dichloroethane	U	99.8
2-Butanone	U	250
Chloroform	U	99.8
1,2-Dichloroethane	U	99.8



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

Blank (B1L1202-BLK1)

Prepared: 12/8/2011 Analyzed: 12/8/2011

Targets (Continued)

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit
1,1,1-Trichloroethane	U	99.8
Cyclohexane	U	99.8
Carbon tetrachloride	U	99.8
Benzene	U	99.8
Trichloroethene	U	99.8
Methylcyclohexane	U	99.8
1,2-Dichloropropane	U	99.8
Bromodichloromethane	U	99.8
cis-1,3-Dichloropropene	U	99.8
trans-1,3-Dichloropropene	U	99.8
1,1,2-Trichloroethane	U	99.8
Dibromochloromethane	U	99.8
Bromoform	U	99.8
4-Methyl-2-pentanone	U	250
Toluene	U	99.8
Tetrachloroethene	U	99.8
2-Hexanone	U	250
1,2-Dibromoethane	U	99.8
Chlorobenzene	U	99.8
Ethylbenzene	U	99.8
meta-/para-Xylene	U	200
ortho-Xylene	U	99.8
Styrene	U	99.8
Isopropylbenzene	U	99.8
1,1,2,2-Tetrachloroethane	U	99.8
1,3-Dichlorobenzene	U	99.8
1,4-Dichlorobenzene	U	99.8
1,2-Dichlorobenzene	U	99.8
1,2-Dibromo-3-chloropropane	U	250



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

Blank (B1L1202-BLK1)

Prepared: 12/8/2011 Analyzed: 12/8/2011

Targets (Continued)

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit
1,2,4-Trichlorobenzene	U	250

Blank (B1L1202-BLK2)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC Limits
<i>Surr: 1,2-Dichloroethane-d4</i>	51.8		50.0	104 82-120
<i>Surr: Toluene-d8</i>	48.7		50.0	97.5 81-116
<i>Surr: 4-Bromofluorobenzene</i>	48.7		50.0	97.4 80-116

Blank (B1L1202-BLK2)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit
Dichlorodifluoromethane	U	250
Chloromethane	U	250
Vinyl chloride	U	100
Bromomethane	U	250
Chloroethane	U	100
Trichlorofluoromethane	U	100
1,1-Dichloroethene	U	100
Carbon disulfide	U	100
1,1,2-Trichloro-1,2,2-trifluoroethane	U	100
Acetone	U	500
Methylene chloride	U	100



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

Blank (B1L1202-BLK2)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets (Continued)

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit
Methyl acetate	U	250
trans-1,2-Dichloroethene	U	100
cis-1,2-Dichloroethene	U	100
Methyl tert-butyl ether	U	100
1,1-Dichloroethane	U	100
2-Butanone	U	250
Chloroform	U	100
1,2-Dichloroethane	U	100
1,1,1-Trichloroethane	U	100
Cyclohexane	U	100
Carbon tetrachloride	U	100
Benzene	U	100
Trichloroethene	U	100
Methylcyclohexane	U	100
1,2-Dichloropropane	U	100
Bromodichloromethane	U	100
cis-1,3-Dichloropropene	U	100
trans-1,3-Dichloropropene	U	100
1,1,2-Trichloroethane	U	100
Dibromochloromethane	U	100
Bromoform	U	100
4-Methyl-2-pentanone	U	250
Toluene	U	100
Tetrachloroethene	U	100
2-Hexanone	U	250
1,2-Dibromoethane	U	100
Chlorobenzene	U	100
Ethylbenzene	U	100
meta-/para-Xylene	U	200



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

Blank (B1L1202-BLK2)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets (Continued)

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit
ortho-Xylene	U	100
Styrene	U	100
Isopropylbenzene	U	100
1,1,2,2-Tetrachloroethane	U	100
1,3-Dichlorobenzene	U	100
1,4-Dichlorobenzene	U	100
1,2-Dichlorobenzene	U	100
1,2-Dibromo-3-chloropropane	U	250
1,2,4-Trichlorobenzene	U	250

LCS (B1L1202-BS1)

Prepared: 12/8/2011 Analyzed: 12/8/2011

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
<i>Surr: 1,2-Dichloroethane-d4</i>	47.1		50.0	94.2	82-120
<i>Surr: Toluene-d8</i>	45.6		50.0	91.2	81-116
<i>Surr: 4-Bromofluorobenzene</i>	49.9		50.0	99.9	80-116

LCS (B1L1202-BS1)

Prepared: 12/8/2011 Analyzed: 12/8/2011

Targets

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC	%REC Limits
Dichlorodifluoromethane	1,830	249	2,490	73.4	39-124
Chloromethane	2,390	249	2,490	95.7	36-152
Vinyl chloride	2,410	99.8	2,490	96.6	34-138
Bromomethane	1,760	249	2,490	70.7	35-127



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

LCS (B1L1202-BS1)

Prepared: 12/8/2011 Analyzed: 12/8/2011

Targets (Continued)

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
Chloroethane	957	99.8	2,490	38.4 # 51-148
Trichlorofluoromethane	675	99.8	2,490	27.0 18-136
1,1-Dichloroethene	2,500	99.8	2,490	100 55-160
Carbon disulfide	2,210	99.8	2,490	88.6 60-142
1,1,2-Trichloro-1,2,2-trifluoroethane	2,480	99.8	2,490	99.5 67-148
Acetone	1,080	499	2,490	43.3 # 46-138
Methylene chloride	2,610	99.8	2,490	105 72-151
Methyl acetate	2,510	249	2,490	101 67-161
trans-1,2-Dichloroethene	2,490	99.8	2,490	99.8 61-153
cis-1,2-Dichloroethene	2,550	99.8	2,490	102 66-137
Methyl tert-butyl ether	2,430	99.8	2,490	97.5 82-137
1,1-Dichloroethane	2,540	99.8	2,490	102 68-141
2-Butanone	1,380	249	2,490	55.2 38-147
Chloroform	2,560	99.8	2,490	103 78-136
1,2-Dichloroethane	2,520	99.8	2,490	101 73-141
1,1,1-Trichloroethane	2,440	99.8	2,490	97.7 77-136
Cyclohexane	2,310	99.8	2,490	92.5 62-142
Carbon tetrachloride	2,390	99.8	2,490	95.7 73-136
Benzene	2,490	99.8	2,490	99.7 63-141
Trichloroethene	2,460	99.8	2,490	98.4 67-136
Methylcyclohexane	2,430	99.8	2,490	97.3 51-137
1,2-Dichloropropane	2,530	99.8	2,490	102 77-130
Bromodichloromethane	2,510	99.8	2,490	101 83-129
cis-1,3-Dichloropropene	2,490	99.8	2,490	99.6 65-132
trans-1,3-Dichloropropene	2,530	99.8	2,490	102 67-132
1,1,2-Trichloroethane	2,610	99.8	2,490	104 72-137
Dibromochloromethane	2,550	99.8	2,490	102 76-126
Bromoform	2,660	99.8	2,490	107 63-135



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

LCS (B1L1202-BS1)

Prepared: 12/8/2011 Analyzed: 12/8/2011

Targets (Continued)

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
4-Methyl-2-pentanone	2,370	249	2,490	95.1 82-131
Toluene	2,410	99.8	2,490	96.5 69-132
Tetrachloroethene	2,340	99.8	2,490	93.8 63-133
2-Hexanone	1,500	249	2,490	60.0 49-141
1,2-Dibromoethane	2,440	99.8	2,490	97.6 68-130
Chlorobenzene	2,480	99.8	2,490	99.4 68-139
Ethylbenzene	2,400	99.8	2,490	96.2 58-138
meta-/para-Xylene	4,830	200	4,990	96.7 59-138
ortho-Xylene	2,490	99.8	2,490	99.9 52-143
Styrene	2,620	99.8	2,490	105 55-142
Isopropylbenzene	2,460	99.8	2,490	98.6 57-143
1,1,2,2-Tetrachloroethane	2,650	99.8	2,490	106 71-137
1,3-Dichlorobenzene	2,850	99.8	2,490	114 65-140
1,4-Dichlorobenzene	2,820	99.8	2,490	113 66-139
1,2-Dichlorobenzene	2,830	99.8	2,490	114 65-139
1,2-Dibromo-3-chloropropane	2,630	249	2,490	105 74-130
1,2,4-Trichlorobenzene	2,790	249	2,490	112 70-132

LCS (B1L1202-BS2)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC %REC Limits
<i>Surr: 1,2-Dichloroethane-d4</i>	50.5		50.0	101 82-120
<i>Surr: Toluene-d8</i>	49.0		50.0	98.0 81-116
<i>Surr: 4-Bromofluorobenzene</i>	53.5		50.0	107 80-116



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

LCS (B1L1202-BS2)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
Dichlorodifluoromethane	2,030	250	2,500	81.1 39-124
Chloromethane	2,700	250	2,500	108 36-152
Vinyl chloride	2,890	100	2,500	116 34-138
Bromomethane	2,010	250	2,500	80.3 35-127
Chloroethane	1,150	100	2,500	45.8 # 51-148
Trichlorofluoromethane	865	100	2,500	34.6 18-136
1,1-Dichloroethene	2,700	100	2,500	108 55-160
Carbon disulfide	2,360	100	2,500	94.4 60-142
1,1,2-Trichloro-1,2,2-trifluoroethane	2,670	100	2,500	107 67-148
Acetone	1,260	500	2,500	50.6 46-138
Methylene chloride	2,780	100	2,500	111 72-151
Methyl acetate	2,690	250	2,500	108 67-161
trans-1,2-Dichloroethene	2,700	100	2,500	108 61-153
cis-1,2-Dichloroethene	2,760	100	2,500	110 66-137
Methyl tert-butyl ether	2,600	100	2,500	104 82-137
1,1-Dichloroethane	2,770	100	2,500	111 68-141
2-Butanone	1,550	250	2,500	62.1 38-147
Chloroform	2,710	100	2,500	109 78-136
1,2-Dichloroethane	2,670	100	2,500	107 73-141
1,1,1-Trichloroethane	2,590	100	2,500	104 77-136
Cyclohexane	2,480	100	2,500	99.2 62-142
Carbon tetrachloride	2,550	100	2,500	102 73-136
Benzene	2,630	100	2,500	105 63-141
Trichloroethene	2,610	100	2,500	105 67-136
Methylcyclohexane	2,620	100	2,500	105 51-137
1,2-Dichloropropane	2,700	100	2,500	108 77-130
Bromodichloromethane	2,640	100	2,500	106 83-129
cis-1,3-Dichloropropene	2,650	100	2,500	106 65-132



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

LCS (B1L1202-BS2)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets (Continued)

ANALYTE	Result µg/kg	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
trans-1,3-Dichloropropene	2,680	100	2,500	107 67-132
1,1,2-Trichloroethane	2,750	100	2,500	110 72-137
Dibromochloromethane	2,680	100	2,500	107 76-126
Bromoform	2,830	100	2,500	113 63-135
4-Methyl-2-pentanone	2,550	250	2,500	102 82-131
Toluene	2,570	100	2,500	103 69-132
Tetrachloroethene	2,520	100	2,500	101 63-133
2-Hexanone	1,610	250	2,500	64.5 49-141
1,2-Dibromoethane	2,580	100	2,500	103 68-130
Chlorobenzene	2,640	100	2,500	106 68-139
Ethylbenzene	2,580	100	2,500	103 58-138
meta-/para-Xylene	5,160	200	5,000	103 59-138
ortho-Xylene	2,670	100	2,500	107 52-143
Styrene	2,770	100	2,500	111 55-142
Isopropylbenzene	2,650	100	2,500	106 57-143
1,1,2,2-Tetrachloroethane	2,790	100	2,500	112 71-137
1,3-Dichlorobenzene	3,000	100	2,500	120 65-140
1,4-Dichlorobenzene	2,960	100	2,500	118 66-139
1,2-Dichlorobenzene	2,970	100	2,500	119 65-139
1,2-Dibromo-3-chloropropane	2,750	250	2,500	110 74-130
1,2,4-Trichlorobenzene	2,930	250	2,500	117 70-132

Matrix Spike (B1L1202-MS1)

Source: 1112010-09

Prepared: 12/8/2011 Analyzed: 12/8/2011

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC %REC Limits
Surr: 1,2-Dichloroethane-d4	49.6		50.0	99.2 82-120



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

Matrix Spike (B1L1202-MS1)

Source: 1112010-09

Prepared: 12/8/2011 Analyzed: 12/8/2011

Surrogates (Continued)

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
<i>Surr: Toluene-d8</i>	46.5		50.0	93.0	81-116
<i>Surr: 4-Bromofluorobenzene</i>	47.3		50.0	94.6	80-116

Matrix Spike (B1L1202-MS1)

Source: 1112010-09

Prepared: 12/8/2011 Analyzed: 12/8/2011

Targets

ANALYTE	Result µg/kg	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	%REC Limits
1,1-Dichloroethene	2,390		99.3	2,480		96.4	59-172
Benzene	2,320		99.3	2,480		93.4	66-142
Trichloroethene	2,310		99.3	2,480		93.2	62-137
Toluene	2,310		99.3	2,480	19.5	92.3	59-139
Chlorobenzene	2,360		99.3	2,480		95.1	60-133

Matrix Spike Dup (B1L1202-MSD1)

Source: 1112010-09

Prepared: 12/8/2011 Analyzed: 12/8/2011

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
<i>Surr: 1,2-Dichloroethane-d4</i>	49.0		50.0	98.0	82-120
<i>Surr: Toluene-d8</i>	46.0		50.0	91.9	81-116
<i>Surr: 4-Bromofluorobenzene</i>	46.5		50.0	92.9	80-116



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Volatiles by CLP OLM04.2 - GC/MS - Quality Control

Batch: B1L1202

Sample Type: Solid

Matrix Spike Dup (B1L1202-MSD1)

Source: 1112010-09

Prepared: 12/8/2011 Analyzed: 12/8/2011

Targets

ANALYTE	Result µg/kg	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
1,1-Dichloroethene	2,370		99.3	2,480		95.4 59-172	1.06	22
Benzene	2,380		99.3	2,480		95.9 66-142	2.62	21
Trichloroethene	2,380		99.3	2,480		95.7 62-137	2.67	24
Toluene	2,420		99.3	2,480	19.5	96.6 59-139	4.60	21
Chlorobenzene	2,490		99.3	2,480		100 60-133	5.22	21



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Volatiles by CLP OLM04.2 - GC/MS (Low Level) - Quality Control

Batch: B1L1201

Sample Type: Liquid

Blank (B1L1201-BLK1)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
<i>Surr: 1,2-Dichloroethane-d4</i>	10.4		10.0	104	81-124
<i>Surr: Toluene-d8</i>	10.1		10.0	101	86-115
<i>Surr: 4-Bromofluorobenzene</i>	9.90		10.0	99.0	76-115

Blank (B1L1201-BLK1)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit
Dichlorodifluoromethane	U	0.5
Chloromethane	U	0.5
Vinyl chloride	U	0.5
Bromomethane	U	0.5
Chloroethane	U	0.5
Trichlorofluoromethane	U	0.5
1,1-Dichloroethene	U	0.5
Carbon disulfide	U	0.5
1,1,2-Trichloro-1,2,2-trifluoroethane	U	0.5
Acetone	U	5.0
Methylene chloride	U	0.5
Methyl acetate	U	0.5
trans-1,2-Dichloroethene	U	0.5
cis-1,2-Dichloroethene	U	0.5
Methyl tert-butyl ether	U	0.5
1,1-Dichloroethane	U	0.5
2-Butanone	U	5.0
Chloroform	U	0.5
1,2-Dichloroethane	U	0.5



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Volatiles by CLP OLM04.2 - GC/MS (Low Level) - Quality Control

Batch: B1L1201

Sample Type: Liquid

Blank (B1L1201-BLK1)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets (Continued)

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit
1,1,1-Trichloroethane	U	0.5
Cyclohexane	U	0.5
Carbon tetrachloride	U	0.5
Benzene	U	0.5
Trichloroethene	U	0.5
Methylcyclohexane	U	0.5
1,2-Dichloropropane	U	0.5
Bromodichloromethane	U	0.5
cis-1,3-Dichloropropene	U	0.5
trans-1,3-Dichloropropene	U	0.5
1,1,2-Trichloroethane	U	0.5
Dibromochloromethane	U	0.5
Bromoform	U	0.5
4-Methyl-2-pentanone	U	5.0
Toluene	U	0.5
Tetrachloroethene	U	0.5
2-Hexanone	U	5.0
1,2-Dibromoethane	U	0.5
Chlorobenzene	U	0.5
Ethylbenzene	U	0.5
meta-/para-Xylene	U	1.0
ortho-Xylene	U	0.5
Styrene	U	0.5
Isopropylbenzene	U	0.5
1,1,2,2-Tetrachloroethane	U	0.5
1,3-Dichlorobenzene	U	0.5
1,4-Dichlorobenzene	U	0.5
1,2-Dichlorobenzene	U	0.5
1,2-Dibromo-3-chloropropane	U	0.5



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Volatiles by CLP OLM04.2 - GC/MS (Low Level) - Quality Control

Batch: B1L1201

Sample Type: Liquid

Blank (B1L1201-BLK1)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets (Continued)

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit
1,2,4-Trichlorobenzene	U	0.5

LCS (B1L1201-BS1)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC Limits
<i>Surr: 1,2-Dichloroethane-d4</i>	10.4		10.0	104 81-124
<i>Surr: Toluene-d8</i>	10.4		10.0	104 86-115
<i>Surr: 4-Bromofluorobenzene</i>	10.3		10.0	103 76-115

LCS (B1L1201-BS1)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit	Spike Level	%REC Limits
Dichlorodifluoromethane	13.3		10.0	133 64-176
Chloromethane	12.1		10.0	121 70-168
Vinyl chloride	11.7		10.0	117 69-153
Bromomethane	11.2		10.0	112 73-155
Chloroethane	10.5		10.0	105 68-137
Trichlorofluoromethane	11.5		10.0	115 74-137
1,1-Dichloroethene	11.1		10.0	111 71-142
Carbon disulfide	10.9		10.0	109 58-155
1,1,2-Trichloro-1,2,2-trifluoroethane	11.2		10.0	112 85-142
Acetone	5.2		10.0	51.9 46-159
Methylene chloride	10.7		10.0	107 75-126



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Volatiles by CLP OLM04.2 - GC/MS (Low Level) - Quality Control

Batch: B1L1201

Sample Type: Liquid

LCS (B1L1201-BS1)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets (Continued)

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
Methyl acetate	10.1		10.0	101 70-137
trans-1,2-Dichloroethene	10.8		10.0	108 73-127
cis-1,2-Dichloroethene	10.8		10.0	108 83-121
Methyl tert-butyl ether	10.1		10.0	101 82-124
1,1-Dichloroethane	10.9		10.0	109 81-123
2-Butanone	5.2		10.0	52.4 # 57-153
Chloroform	10.9		10.0	109 83-119
1,2-Dichloroethane	10.5		10.0	105 81-120
1,1,1-Trichloroethane	10.6		10.0	106 82-124
Cyclohexane	10.2		10.0	102 77-141
Carbon tetrachloride	10.6		10.0	106 81-124
Benzene	10.6		10.0	106 80-122
Trichloroethene	10.6		10.0	106 79-121
Methylcyclohexane	11.0		10.0	110 86-126
1,2-Dichloropropane	10.4		10.0	104 82-119
Bromodichloromethane	10.5		10.0	105 82-118
cis-1,3-Dichloropropene	10.2		10.0	102 78-120
trans-1,3-Dichloropropene	10.0		10.0	100 75-123
1,1,2-Trichloroethane	10.3		10.0	103 81-116
Dibromochloromethane	10.1		10.0	101 79-112
Bromoform	10.2		10.0	102 76-120
4-Methyl-2-pentanone	8.8		10.0	88.0 79-130
Toluene	10.4		10.0	104 81-122
Tetrachloroethene	10.4		10.0	104 81-120
2-Hexanone	5.0		10.0	50.3 # 69-138
1,2-Dibromoethane	10.1		10.0	101 81-117
Chlorobenzene	10.4		10.0	104 82-119
Ethylbenzene	10.5		10.0	105 79-126
meta-/para-Xylene	20.7		20.0	103 73-131



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Volatiles by CLP OLM04.2 - GC/MS (Low Level) - Quality Control

Batch: B1L1201

Sample Type: Liquid

LCS (B1L1201-BS1)

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets (Continued)

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
ortho-Xylene	10.5		10.0	105 79-124
Styrene	10.4		10.0	104 65-126
Isopropylbenzene	10.6		10.0	106 82-128
1,1,2,2-Tetrachloroethane	10.1		10.0	101 81-117
1,3-Dichlorobenzene	10.5		10.0	105 82-119
1,4-Dichlorobenzene	10.3		10.0	103 82-120
1,2-Dichlorobenzene	10.2		10.0	102 81-117
1,2-Dibromo-3-chloropropane	9.7		10.0	96.9 74-122
1,2,4-Trichlorobenzene	11.2		10.0	112 78-119

Matrix Spike (B1L1201-MS1)

Source: 1112010-03

Prepared: 12/9/2011 Analyzed: 12/9/2011

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC %REC Limits
<i>Surr: 1,2-Dichloroethane-d4</i>	10.6		10.0	106 81-124
<i>Surr: Toluene-d8</i>	10.2		10.0	102 86-115
<i>Surr: 4-Bromofluorobenzene</i>	10.0		10.0	100 76-115

Matrix Spike (B1L1201-MS1)

Source: 1112010-03

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC Limits
1,1-Dichloroethene	11.6		10.0		116 61-145
Benzene	10.9		10.0		109 76-127
Trichloroethene	10.9		10.0		109 71-120
Toluene	11.1		10.0	0.4	107 76-125



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Volatiles by CLP OLM04.2 - GC/MS (Low Level) - Quality Control

Batch: B1L1201

Sample Type: Liquid

Matrix Spike (B1L1201-MS1)

Source: 1112010-03

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets (Continued)

ANALYTE	Result µg/l	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits
Chlorobenzene	10.7			10.0	107	75-130

Matrix Spike Dup (B1L1201-MSD1)

Source: 1112010-03

Prepared: 12/9/2011 Analyzed: 12/9/2011

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC	Limits
<i>Surr: 1,2-Dichloroethane-d4</i>	11.1		10.0	111	81-124
<i>Surr: Toluene-d8</i>	10.4		10.0	104	86-115
<i>Surr: 4-Bromofluorobenzene</i>	10.3		10.0	103	76-115

Matrix Spike Dup (B1L1201-MSD1)

Source: 1112010-03

Prepared: 12/9/2011 Analyzed: 12/9/2011

Targets

ANALYTE	Result µg/l	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
1,1-Dichloroethene	11.0			10.0		110 61-145	5.56	14
Benzene	10.4			10.0		104 76-127	4.40	11
Trichloroethene	10.4			10.0		104 71-120	4.59	14
Toluene	10.7			10.0	0.4	103 76-125	4.01	13
Chlorobenzene	10.3			10.0		103 75-130	3.33	13



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Metals by CLP ILM05.3 - ICP - Quality Control

Batch: B1L0901

Sample Type: Solid

Blank (B1L0901-BLK1)

Prepared: 12/9/2011 Analyzed: 1/4/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers Limit
Aluminum	U	10.0
Barium	U	1.0
Beryllium	U	0.5
Cadmium	U	0.5
Calcium	U	15.0
Chromium	U	1.0
Cobalt	U	2.0
Copper	U	2.0
Iron	U	2.5
Magnesium	U	15.0
Manganese	U	0.5
Nickel	U	2.0
Potassium	U	100
Silver	U	1.0
Sodium	U	50.0
Vanadium	U	2.0
Zinc	U	2.0

LCS (B1L0901-BS1)

Prepared: 12/9/2011 Analyzed: 1/4/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers Limit	Spike Level	%REC Limits
Aluminum	92.1	10.0	100	92.1 75-125
Barium	176	1.0	200	87.8 75-125
Beryllium	4.5	0.5	5.00	90.6 75-125
Cadmium	4.1	0.5	5.00	81.7 75-125
Calcium	8,800	15.0	10,000	88.0 75-125



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Metals by CLP ILM05.3 - ICP - Quality Control

Batch: B1L0901

Sample Type: Solid

LCS (B1L0901-BS1)

Prepared: 12/9/2011 Analyzed: 1/4/2012

Targets (Continued)

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
Chromium	37.3	1.0	40.0	93.2 75-125
Cobalt	17.2	2.0	20.0	86.0 75-125
Copper	37.4	2.0	40.0	93.4 75-125
Iron	93.4	2.5	100	93.4 75-125
Magnesium	9,380	15.0	10,000	93.8 75-125
Manganese	36.4	0.5	40.0	90.9 75-125
Nickel	35.5	2.0	40.0	88.7 75-125
Potassium	11,500	100	10,000	115 75-125
Silver	3.7	1.0	5.00	74.7 # 75-125
Sodium	10,800	50.0	10,000	108 75-125
Vanadium	38.3	2.0	40.0	95.7 75-125
Zinc	93.4	2.0	100	93.4 75-125

Matrix Spike (B1L0901-MS1)

Source: 1112013-03

Prepared: 12/9/2011 Analyzed: 1/4/2012

Targets

ANALYTE	Result mg/kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC Limits
Aluminum	15,300	16.2	162	6,020	NR # 75-125
Barium	350	1.6	323	47.7	93.4 75-125
Beryllium	8.5	0.8	8.08	0.8	95.2 75-125
Cadmium	6.3	0.8	8.08		77.8 75-125
Calcium	15,500	24.2	16,200	1,150	88.7 75-125
Chromium	73.2	1.6	64.6	103	NR # 75-125
Cobalt	36.8	3.2	32.3	21.1	48.5 # 75-125
Copper	75.2	3.2	64.6	294	NR # 75-125
Iron	16,400	4.0	162	165,000	NR # 75-125
Magnesium	19,900	24.2	16,200	3,390	102 75-125



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Metals by CLP ILM05.3 - ICP - Quality Control

Batch: B1L0901

Sample Type: Solid

Matrix Spike (B1L0901-MS1)

Source: 1112013-03

Prepared: 12/9/2011 Analyzed: 1/4/2012

Targets (Continued)

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits
Manganese	154		0.8	64.6	681	NR # 75-125
Nickel	71.7		3.2	64.6	209	NR # 75-125
Potassium	23,100		162	16,200	2,760	126 # 75-125
Silver	6.1		1.6	8.08		75.5 75-125
Sodium	27,900		80.8	16,200	8,080	123 75-125
Vanadium	85.9		3.2	64.6	17.2	106 75-125
Zinc	192		3.2	162	49.2	88.7 75-125

Matrix Spike Dup (B1L0901-MSD1)

Source: 1112013-03

Prepared: 12/9/2011 Analyzed: 1/4/2012

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Aluminum	14,900		16.7	167	6,020	NR # 75-125	2.23	20
Barium	349		1.7	334	47.7	90.4 75-125	0.07	20
Beryllium	8.6		0.8	8.34	0.8	92.4 75-125	0.13	20
Cadmium	6.5		0.8	8.34		77.7 75-125	2.98	20
Calcium	15,800		25.0	16,700	1,150	87.6 75-125	1.83	20
Chromium	74.7		1.7	66.7	103	NR # 75-125	2.01	20
Cobalt	32.4		3.3	33.4	21.1	33.8 # 75-125	12.7	20
Copper	72.8		3.3	66.7	294	NR # 75-125	3.36	20
Iron	17,200		4.2	167	165,000	NR # 75-125	4.58	20
Magnesium	20,000		25.0	16,700	3,390	99.8 75-125	0.85	20
Manganese	149		0.8	66.7	681	NR # 75-125	3.46	20
Nickel	68.8		3.3	66.7	209	NR # 75-125	4.11	20
Potassium	23,200		167	16,700	2,760	123 75-125	0.42	20
Silver	6.2		1.7	8.34		74.9 # 75-125	2.27	20
Sodium	27,700		83.4	16,700	8,080	118 75-125	0.58	20



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Metals by CLP ILM05.3 - ICP - Quality Control

Batch: B1L0901

Sample Type: Solid

Matrix Spike Dup (B1L0901-MSD1)

Source: 1112013-03

Prepared: 12/9/2011 Analyzed: 1/4/2012

Targets (Continued)

ANALYTE	Result mg/kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit
Vanadium	85.4	3.3	66.7	17.2	102	75-125	0.57	20
Zinc	200	3.3	167	49.2	90.4	75-125	3.78	20

Reference (B1L0901-SRM1)

Prepared: 12/9/2011 Analyzed: 1/4/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit
Aluminum	93.9	10.0	115		81.6	47.6-152		
Barium	1.3	1.0	1.60		80.5	62.5-137		
Beryllium	4.7	0.5	4.90		96.7	61.2-138		
Cadmium	9.4	0.5	10.9		86.2	70.6-128		
Calcium	44,400	15.0	44,200		101	68.6-131		
Chromium	27.0	1.0	27.1		99.5	68.3-131		
Cobalt	35.9	2.0	37.4		96.0	64.7-135		
Copper	1,700	2.0	1,770		95.9	74.6-126		
Iron	6,330	2.5	6,470		97.8	66.2-133		
Magnesium	28,700	15.0	29,200		98.3	70.2-129		
Manganese	59.6	0.5	61.0		97.6	68.2-132		
Nickel	15.2	2.0	16.3		93.3	55.2-145		
Potassium	30.1	99.8	39.7		75.8	0-215		
Silver	6.8	1.0	5.90		116	45.8-154		
Sodium	26.7	49.9	72.5		36.9	0-298		
Vanadium	17.9	2.0	17.6		102	65.9-134		
Zinc	42.1	2.0	47.5		88.6	43.2-156		



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Metals by CLP ILM05.3 - ICP - Quality Control

Batch: B1L1203

Sample Type: Liquid

Blank (B1L1203-BLK1)

Prepared: 12/12/2011 Analyzed: 1/6/2012

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit
Aluminum	U	100
Barium	U	10.0
Beryllium	U	5.0
Cadmium	U	5.0
Calcium	U	150
Chromium	U	10.0
Cobalt	U	20.0
Copper	U	20.0
Iron	U	25.0
Magnesium	U	150
Manganese	U	5.0
Nickel	U	20.0
Potassium	U	1,000
Silver	U	10.0
Sodium	U	500
Vanadium	U	20.0
Zinc	U	20.0

LCS (B1L1203-BS1)

Prepared: 12/12/2011 Analyzed: 1/6/2012

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit	Spike Level	%REC Limits
Aluminum	948	100	1,000	94.8 75-125
Barium	1,790	10.0	2,000	89.4 75-125
Beryllium	46.1	5.0	50.0	92.1 75-125
Cadmium	41.3	5.0	50.0	82.6 75-125
Calcium	92,100	150	100,000	92.1 75-125



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Metals by CLP ILM05.3 - ICP - Quality Control

Batch: B1L1203

Sample Type: Liquid

LCS (B1L1203-BS1)

Prepared: 12/12/2011 Analyzed: 1/6/2012

Targets (Continued)

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
Chromium	378	10.0	400	94.6 75-125
Cobalt	177	20.0	200	88.6 75-125
Copper	384	20.0	400	96.0 75-125
Iron	930	25.0	1,000	93.0 75-125
Magnesium	96,600	150	100,000	96.6 75-125
Manganese	370	5.0	400	92.5 75-125
Nickel	359	20.0	400	89.8 75-125
Potassium	126,000	1,000	100,000	126 # 75-125
Silver	39.7	10.0	50.0	79.4 75-125
Sodium	118,000	500	100,000	118 75-125
Vanadium	387	20.0	400	96.9 75-125
Zinc	935	20.0	1,000	93.5 75-125



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Metals by CLP ILM05.3 - ICP - Quality Control

Batch: B1L1402

Sample Type: Solid

Blank (B1L1402-BLK1)

Prepared: 12/15/2011 Analyzed: 1/5/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers	Limit
Aluminum	U		10.0
Barium	U		1.0
Beryllium	U		0.5
Cadmium	U		0.5
Calcium	U		15.0
Chromium	U		1.0
Cobalt	U		2.0
Copper	U		2.0
Iron	U		2.5
Magnesium	U		15.0
Manganese	U		0.5
Nickel	U		2.0
Potassium	U		100
Silver	U		1.0
Sodium	U		50.0
Vanadium	U		2.0
Zinc	U		2.0

LCS (B1L1402-BS1)

Prepared: 12/15/2011 Analyzed: 1/5/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers	Limit	Spike Level	%REC Limits
Aluminum	92.9		10.0	100	92.9 75-125
Barium	175		1.0	200	87.7 75-125
Beryllium	4.6		0.5	5.00	91.7 75-125
Cadmium	3.9		0.5	5.00	78.7 75-125
Calcium	8,700		15.0	10,000	87.0 75-125



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Metals by CLP ILM05.3 - ICP - Quality Control

Batch: B1L1402

Sample Type: Solid

LCS (B1L1402-BS1)

Prepared: 12/15/2011 Analyzed: 1/5/2012

Targets (Continued)

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC	Limits
Chromium	36.6	1.0	40.0	91.5	75-125
Cobalt	17.1	2.0	20.0	85.3	75-125
Copper	37.8	2.0	40.0	94.4	75-125
Iron	91.8	2.5	100	91.8	75-125
Magnesium	9,210	15.0	10,000	92.1	75-125
Manganese	36.5	0.5	40.0	91.2	75-125
Nickel	34.6	2.0	40.0	86.6	75-125
Potassium	11,800	100	10,000	118	75-125
Silver	4.0	1.0	5.00	79.9	75-125
Sodium	11,000	50.0	10,000	110	75-125
Vanadium	38.1	2.0	40.0	95.3	75-125
Zinc	89.5	2.0	100	89.5	75-125

Matrix Spike (B1L1402-MS1)

Source: 1112015-08

Prepared: 12/15/2011 Analyzed: 1/5/2012

Targets

ANALYTE	Result mg/kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC	Limits
Aluminum	5,770	13.2	132	3,160	NR #	75-125
Barium	292	1.3	263	90.4	76.6	75-125
Beryllium	6.5	0.7	6.58	0.4	92.7	75-125
Cadmium	5.0	0.7	6.58		76.5	75-125
Calcium	22,200	19.8	13,200	19,900	17.7 #	75-125
Chromium	63.6	1.3	52.7	13.0	95.9	75-125
Cobalt	27.1	2.6	26.3	4.5	85.9	75-125
Copper	89.6	2.6	52.7	22.4	128 #	75-125
Iron	18,200	3.3	132	18,200	NR #	75-125
Magnesium	14,400	19.8	13,200	1,880	94.9	75-125



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Metals by CLP ILM05.3 - ICP - Quality Control

Batch: B1L1402

Sample Type: Solid

Matrix Spike (B1L1402-MS1)

Source: 1112015-08

Prepared: 12/15/2011 Analyzed: 1/5/2012

Targets (Continued)

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits
Manganese	342		0.7	52.7	308	64.9 # 75-125
Nickel	55.5		2.6	52.7	8.7	88.9 75-125
Potassium	17,600		132	13,200	1,220	124 75-125
Silver	5.1		1.3	6.58	0.2	75.7 75-125
Sodium	19,800		65.8	13,200	4,770	114 75-125
Vanadium	62.8		2.6	52.7	10.6	99.1 75-125
Zinc	266		2.6	132	181	64.1 # 75-125

Matrix Spike Dup (B1L1402-MSD1)

Source: 1112015-08

Prepared: 12/15/2011 Analyzed: 1/5/2012

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD	RPD Limit
Aluminum	5,720		13.3	133	3,160	NR # 75-125	0.86	20
Barium	297		1.3	266	90.4	77.5 75-125	1.53	20
Beryllium	6.4		0.7	6.66	0.4	90.9 75-125	0.78	20
Cadmium	5.1		0.7	6.66		76.2 75-125	0.65	20
Calcium	20,000		20.0	13,300	19,900	0.312# 75-125	10.8	20
Chromium	58.4		1.3	53.3	13.0	85.2 75-125	8.46	20
Cobalt	26.0		2.7	26.6	4.5	80.9 75-125	4.03	20
Copper	75.5		2.7	53.3	22.4	99.7 75-125	17.1	20
Iron	15,700		3.3	133	18,200	NR # 75-125	14.9	20
Magnesium	14,400		20.0	13,300	1,880	93.7 75-125	0.07	20
Manganese	285		0.7	53.3	308	NR # 75-125	18.3	20
Nickel	53.7		2.7	53.3	8.7	84.4 75-125	3.46	20
Potassium	17,500		133	13,300	1,220	122 75-125	0.58	20
Silver	5.2		1.3	6.66	0.2	75.5 75-125	0.89	20
Sodium	20,000		66.6	13,300	4,770	114 75-125	0.61	20



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Metals by CLP ILM05.3 - ICP - Quality Control

Batch: B1L1402

Sample Type: Solid

Matrix Spike Dup (B1L1402-MSD1)

Source: 1112015-08

Prepared: 12/15/2011 Analyzed: 1/5/2012

Targets (Continued)

ANALYTE	Result mg/kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit
Vanadium	62.4	2.7	53.3	10.6	97.3 75-125	0.53 20
Zinc	349	2.7	133	181	126 # 75-125	27.1 # 20

Reference (B1L1402-SRM1)

Prepared: 12/15/2011 Analyzed: 1/5/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC Limits	RPD RPD Limit
Aluminum	99.0	10.0	115		86.1 47.6-152	
Barium	1.3	1.0	1.60		83.2 62.5-137	
Beryllium	4.9	0.5	4.90		99.5 61.2-138	
Cadmium	9.2	0.5	10.9		84.6 70.6-128	
Calcium	43,700	15.0	44,200		98.9 68.6-131	
Chromium	26.8	1.0	27.1		98.9 68.3-131	
Cobalt	35.4	2.0	37.4		94.7 64.7-135	
Copper	1,730	2.0	1,770		97.9 74.6-126	
Iron	6,520	2.5	6,470		101 66.2-133	
Magnesium	28,300	15.0	29,200		96.8 70.2-129	
Manganese	59.8	0.5	61.0		98.1 68.2-132	
Nickel	15.2	2.0	16.3		93.1 55.2-145	
Potassium	34.9	99.8	39.7		88.0 0-215	
Silver	5.7	1.0	5.90		97.1 45.8-154	
Sodium	30.7	49.9	72.5		42.3 0-298	
Vanadium	17.7	2.0	17.6		101 65.9-134	
Zinc	42.8	2.0	47.5		90.1 43.2-156	



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Metals by CLP ILM05.3 - ICP/MS - Quality Control

Batch: B1L0902

Sample Type: Solid

Blank (B1L0902-BLK1)

Prepared: 12/9/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers Limit
Antimony	U	0.5
Arsenic	U	0.5
Lead	U	0.5
Selenium	U	0.5
Thallium	U	0.5

LCS (B1L0902-BS1)

Prepared: 12/9/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
Antimony	19.9	0.5	20.0	99.6 85-115
Arsenic	19.1	0.5	20.0	95.4 85-115
Lead	20.5	0.5	20.0	103 85-115
Selenium	20.4	0.5	20.0	102 85-115
Thallium	20.7	0.5	20.0	103 85-115

Matrix Spike (B1L0902-MS1)

Source: 1112013-03

Prepared: 12/9/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result mg/kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC Limits
Antimony	6.9	0.8	33.2	2.2	14.3 # 75-125
Arsenic	35.7	0.8	33.2	44.2	NR # 75-125
Lead	57.2	0.8	33.2	20.2	112 75-125
Selenium	29.9	0.8	33.2	0.6	87.9 75-125
Thallium	35.1	0.8	33.2	0.4	104 75-125



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Metals by CLP ILM05.3 - ICP/MS - Quality Control

Batch: B1L0902

Sample Type: Solid

Matrix Spike Dup (B1L0902-MSD1)

Source: 1112013-03

Prepared: 12/9/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit
Antimony	5.2		0.8	31.9	2.2	9.32	# 75-125	29.4	# 20
Arsenic	36.3		0.8	31.9	44.2	NR	# 75-125	1.69	20
Lead	48.3		0.8	31.9	20.2	88.3	75-125	16.9	20
Selenium	28.0		0.8	31.9	0.6	85.8	75-125	6.47	20
Thallium	33.5		0.8	31.9	0.4	104	75-125	4.73	20

Reference (B1L0902-SRM1)

Prepared: 12/9/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit
Antimony	77.1		2.0	66.0		117	41.8-157		
Arsenic	267		2.0	253		106	60.8-139		
Lead	61.4		2.0	56.9		108	72.7-127		
Selenium	12.6		2.0	10.0		126	41-159		
Thallium	10.8		2.0	9.50		114	30.5-169		



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Metals by CLP ILM05.3 - ICP/MS - Quality Control

Batch: B1L1204

Sample Type: Liquid

Blank (B1L1204-BLK1)

Prepared: 12/12/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit
Antimony	U	2.0
Arsenic	U	2.0
Lead	U	2.0
Selenium	U	2.0
Thallium	U	2.0

LCS (B1L1204-BS1)

Prepared: 12/12/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
Antimony	203	2.0	200	102 85-115
Arsenic	197	2.0	200	98.4 85-115
Lead	207	2.0	200	104 85-115
Selenium	207	2.0	200	103 85-115
Thallium	214	2.0	200	107 85-115



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Metals by CLP ILM05.3 - ICP/MS - Quality Control

Batch: B1L1403

Sample Type: Solid

Blank (B1L1403-BLK1)

Prepared: 12/15/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers Limit
Antimony	U	0.5
Arsenic	U	0.5
Lead	U	0.5
Selenium	U	0.5
Thallium	U	0.5

LCS (B1L1403-BS1)

Prepared: 12/15/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
Antimony	19.8	0.5	20.0	99.0 85-115
Arsenic	18.9	0.5	20.0	94.7 85-115
Lead	20.3	0.5	20.0	102 85-115
Selenium	20.3	0.5	20.0	102 85-115
Thallium	20.6	0.5	20.0	103 85-115

Matrix Spike (B1L1403-MS1)

Source: 1112015-08

Prepared: 12/15/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result mg/kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC Limits
Antimony	13.1	0.6	25.6	0.2	50.2 # 75-125
Arsenic	30.8	0.6	25.6	6.5	94.9 75-125
Lead	95.0	0.6	25.6	53.0	164 # 75-125
Selenium	26.2	0.6	25.6	0.5	100 75-125
Thallium	27.2	0.6	25.6	0.2	106 75-125



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Metals by CLP ILM05.3 - ICP/MS - Quality Control

Batch: B1L1403

Sample Type: Solid

Matrix Spike Dup (B1L1403-MSD1)

Source: 1112015-08

Prepared: 12/15/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD RPD	Limit
Antimony	12.5		0.6	25.3	0.2	48.6 # 75-125	4.35	20
Arsenic	30.3		0.6	25.3	6.5	94.2 75-125	1.58	20
Lead	128		0.6	25.3	53.0	298 # 75-125	29.9 #	20
Selenium	25.1		0.6	25.3	0.5	97.4 75-125	4.20	20
Thallium	25.8		0.6	25.3	0.2	101 75-125	5.17	20

Reference (B1L1403-SRM1)

Prepared: 12/15/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD RPD	Limit
Antimony	77.1		2.0	66.0		117 41.8-157		
Arsenic	263		2.0	253		104 60.8-139		
Lead	58.2		2.0	56.9		102 72.7-127		
Selenium	12.2		2.0	10.0		122 41-159		
Thallium	11.2		2.0	9.50		118 30.5-169		



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Metals by CLP ILM05.3 - CVAAS - Quality Control

Batch: B1L1406

Sample Type: Solid

Blank (B1L1406-BLK1)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers	Limit
Mercury	U		0.080

Blank (B1L1406-BLK2)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers	Limit
Mercury	U		0.080

Blank (B1L1406-BLK3)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers	Limit
Mercury	U		0.080

Blank (B1L1406-BLK4)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers	Limit
Mercury	U		0.080



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Metals by CLP ILM05.3 - CVAAS - Quality Control

Batch: B1L1406

Sample Type: Solid

Blank (B1L1406-BLK5)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers	Reporting Limit
Mercury	U		0.080

LCS (B1L1406-BS1)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers	Reporting Limit	Spike Level	%REC Limits
Mercury	0.390		0.080	0.400	97.5 80-120

Calibration Check (B1L1406-CCV1)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits
Mercury	0.408			0.400	102	80-120

Calibration Check (B1L1406-CCV2)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Reporting Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits
Mercury	0.404			0.400	101	80-120



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Metals by CLP ILM05.3 - CVAAS - Quality Control

Batch: B1L1406

Sample Type: Solid

Calibration Check (B1L1406-CCV3)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	Limits
Mercury	0.404			0.400		101	80-120

Calibration Check (B1L1406-CCV4)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	Limits
Mercury	0.404			0.400		101	80-120

Matrix Spike (B1L1406-MS1)

Source: 1112013-03

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	Limits
Mercury	0.572		0.108	0.539	0.050	96.7	75-125

Matrix Spike (B1L1406-MS2)

Source: 1112015-08

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	Limits
Mercury	0.335		0.060	0.302	0.042	97.1	75-125



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Region 6 Laboratory

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Metals by CLP ILM05.3 - CVAAS - Quality Control

Batch: B1L1406

Sample Type: Solid

Matrix Spike Dup (B1L1406-MSD1)

Source: 1112013-03

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD RPD	Limit
Mercury	0.588		0.115	0.577	0.050	93.3 75-125	2.85	20

Matrix Spike Dup (B1L1406-MSD2)

Source: 1112015-08

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD RPD	Limit
Mercury	0.341		0.062	0.310	0.042	96.5 75-125	1.79	20

Reference (B1L1406-SRM1)

Prepared: 12/15/2011 Analyzed: 12/16/2011

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD RPD	Limit
Mercury	3.13		0.748	3.59		87.3 51.8-148		



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Metals by CLP ILM05.3 - CVAAS - Quality Control

Batch: B1L2001

Sample Type: Liquid

Blank (B1L2001-BLK1)

Prepared: 12/19/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit
Mercury	U	0.200

Blank (B1L2001-BLK2)

Prepared: 12/19/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit
Mercury	U	0.200

Blank (B1L2001-BLK3)

Prepared: 12/19/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit
Mercury	U	0.200

LCS (B1L2001-BS1)

Prepared: 12/19/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result µg/l	Analyte Reporting Qualifiers Limit	Spike Level	%REC Limits
Mercury	1.11	0.200	1.00	111 80-120



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Region 6 Laboratory

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Metals by CLP ILM05.3 - CVAAS - Quality Control

Batch: B1L2001

Sample Type: Liquid

Calibration Check (B1L2001-CCV1)

Prepared: 12/19/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result µg/l	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits
Mercury	1.05			1.00	105	0-200

Calibration Check (B1L2001-CCV2)

Prepared: 12/19/2011 Analyzed: 12/20/2011

Targets

ANALYTE	Result µg/l	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits
Mercury	1.03			1.00	103	0-200



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Results

from

**TCEQ Laboratory
5144 E. Sam Houston Prkwy N.
Houston, TX 77015**



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

**Miscellaneous Results
(TCEQ)**

Batch: TCEQ

Matrix: Liquid

Laboratory ID	Station ID	Cyanide, Total mg/L	Analyte Qualifier	Specific Method	Date Analyzed
1112015-01	ER-1	<0.04		335.4	12/15/11
1112015-02	ER-2	<0.04		335.4	12/15/11
1112015-03	ER-3	<0.04		335.4	12/15/11

Batch: TCEQ

Matrix: Solid

Laboratory ID	Station ID	Cyanide, Total in Sediment mg/kg	Analyte Qualifier	Specific Method	Date Analyzed
1112010-01	C-SD5-1	<29.5		335.4	12/14/11
1112010-02	D-SD5-1	<25.3		335.4	12/14/11
1112010-05	E-SD5-1	<22.3		335.4	12/14/11
1112010-08	F-SD5-1	<14.0		335.4	12/14/11
1112010-09	G-SD5-1	<9.29		335.4	12/14/11
1112010-10	J-SD5-1	<21.4		335.4	12/14/11
1112010-11	L-SD5-1	<11.2		335.4	12/14/11
1112010-12	L-SD5-1 D	<13.0		335.4	12/14/11
1112010-13	N-SD5-1	<14.3		335.4	12/14/11
1112010-14	P-SD5-1	<14.5		335.4	12/14/11
1112015-05	A-SD5-1	<14.2		335.4	12/14/11
1112015-06	B-SD5-1	<10.3		335.4	12/14/11
1112015-08	H-SD5-1	<14.7		335.4	12/14/11
1112015-09	K-SD5-1	<14.2		335.4	12/14/11
1112015-10	M-SD5-1	<23.9		335.4	12/14/11
1112015-11	O-SD5-1	<10.7		335.4	12/14/11
1112015-12	O-SD5-1 D	<19.1		335.4	12/14/11
1112015-13	Q-SD5-1	<16.3		335.4	12/14/11
1112015-14	R-SD5-1	<24.9		335.4	12/14/11
1112015-15	S-SD5-1	<22.7		335.4	12/14/11



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**Miscellaneous Results
(TCEQ)**

Batch: TCEQ

Matrix: Solid

Laboratory ID	Station ID	Percent Total Solids	Analyte Qualifier	Specific Method	Date Analyzed
		Percent			
1112010-01	C-SD5-1	54.36		SM18	12/12/11
1112010-02	D-SD5-1	54.18		SM18	12/12/11
1112010-05	E-SD5-1	58.61		SM18	12/12/11
1112010-08	F-SD5-1	67.24		SM18	12/12/11
1112010-09	G-SD5-1	59.86		SM18	12/12/11
1112010-10	J-SD5-1	65.63		SM18	12/12/11
1112010-11	L-SD5-1	64.90		SM18	12/12/11
1112010-12	L-SD5-1 D	66.31		SM18	12/12/11
1112010-13	N-SD5-1	62.84		SM18	12/12/11
1112010-14	P-SD5-1	65.68		SM18	12/12/11
1112015-05	A-SD5-1	54.80		SM18	12/13/11
1112015-06	B-SD5-1	63.99		SM18	12/13/11
1112015-08	H-SD5-1	65.30		SM18	12/13/11
1112015-09	K-SD5-1	61.06		SM18	12/13/11
1112015-10	M-SD5-1	45.89		SM18	12/13/11
1112015-11	O-SD5-1	56.08		SM18	12/13/11
1112015-12	O-SD5-1 D	55.26		SM18	12/13/11
1112015-13	Q-SD5-1	46.31		SM18	12/13/11
1112015-14	R-SD5-1	42.16		SM18	12/13/11
1112015-15	S-SD5-1	60.11		SM18	12/12/11



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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040

Client No:

SDG No:

L

Date Shipped: 12/6/2011 Carrier Name: FedEx Airbill: 7954 7733 9054 Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record Relinquished By: <i>[Signature]</i> (Date / Time): 12/6/11 9:00 Received By: <i>[Signature]</i> (Date / Time): 12/6/11 9:55 2 3 4	For Lab Use Only Lab Contract No: _____ Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____
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SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
ER-1	Water - Field QC/ JASON STROUP	L/G	VOA (35)	6-475990 (HCL), 6-475991 (HCL), 6-475992 (HCL), 6-475993 (HCL), 6-475994 (HCL), 6-475995 (HCL), 6-475996 (HCL), 6-475997 (HCL), 6-475998 (HCL) (9) 6-499029 (HCL), 6-499030 (HCL), 6-499031 (HCL) (3)	ER-1	S: 12/5/2011 18:00	
ER-2	Water - Field QC/ JASON STROUP	L/G	VOA (35)		ER-2	S: 12/6/2011 16:00	
FB-1	Water - Field QC/ JASON STROUP	L/G	VOA (35)	6-499007 (HCL), 6-499008 (HCL), 6-499009 (HCL) (3)	FB-1	S: 12/5/2011 17:30	
FB-2	Water - Field QC/ JASON STROUP	L/G	VOA (35)	6-499039 (HCL), 6-499040 (HCL), 6-499041 (HCL) (3)	FB-2	S: 12/6/2011 9:40	

Shipment for Case Complete?	Sample(s) to be used for laboratory QC: ER-1	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 1°C	Chain of Custody Seal Number:
Analysis Key: VOA = TCL Low VOA	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input type="checkbox"/>	Shipment Iced? <input type="checkbox"/>

TR Number: 6-574702950-120611-0003

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040
Client No: _____
SDG No: _____

L

Date Shipped: 12/6/2011 Carrier Name: FedEx Airbill: 7954 7733 9570 Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record Relinquished By: <i>[Signature]</i> (Date / Time) 12/6/11 14:00 Received By: <i>[Signature]</i> (Date / Time) 12/9/11 9:55 2 _____ 3 _____ 4 _____	Sampler Signature: <i>[Signature]</i> For Lab Use Only Lab Contract No: _____ Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____
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SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
F-SD5-1	Sediment/ JASON STROUP	L/G	VOA (35)	6-475982 (Ice Only), 6-475983 (Ice Only) (2)	F-SD5-1	S: 12/5/2011 15:05	
G-SD5-1	Sediment/ JASON STROUP	L/G	VOA (35)	6-475978 (Ice Only), 6-475979 (Ice Only) (2)	G-SD5-1	S: 12/5/2011 12:05	
L-SD5-1	Sediment/ JASON STROUP	L/G	VOA (35)	6-475970 (Ice Only), 6-475971 (Ice Only) (2)	L-SD5-1	S: 12/5/2011 11:30	
L-SD5-1 D	Sediment/ JASON STROUP	L/G	VOA (35)	6-475974 (Ice Only), 6-475975 (Ice Only) (2)	L-SD5-1 D	S: 12/5/2011 11:30	
N-SD5-1	Sediment/ JASON STROUP	L/G	VOA (35)	6-475966 (Ice Only), 6-475967 (Ice Only) (2)	N-SD5-1	S: 12/5/2011 10:35	
TB-1	Water - Field QC/ SHEENA STYGER	L/G	VOA (35)	6-499004 (HCL), 6-499005 (HCL), 6-499006 (HCL) (3)	TB-1	S: 12/5/2011 14:35	

Shipment for Case Complete? <input checked="" type="checkbox"/>	Sample(s) to be used for laboratory QC: N-SD5-1	Additional Sampler Signature(s): <i>[Signature]</i>	Cooler Temperature Upon Receipt: -1°C	Chain of Custody Seal Number: _____
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: L Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
VOA = TCL Low VOA, VOA = TCL VOA				

TR Number: 6-574702950-120611-0001

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F2/51.047 Page 1 of 1

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040
Client No:
SDG No:

L

Date Shipped: 12/6/2011 Carrier Name: FedEx Airbill: 7978 0777 8884 Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record Relinquished By: (Date / Time) Received By: (Date / Time) 1. 8/11/12 12/6/11 9:00 2. 3. 4.	Sampler Signature: Date / Time: 12/6/11 9:55	For Lab Use Only Lab Contract No: Unit Price: Transfer To: Lab Contract No: Unit Price:
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SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
C-SD5-1	Sediment/ JASON STROUP	L/G	CN. (35)	6-499016 (Ice Only) (1)	C-SD5-1	S: 12/6/2011 11:45	
D-SD5-1	Sediment/ JASON STROUP	L/G	CN. (35)	6-475999 (Ice Only) (1)	D-SD5-1	S: 12/6/2011 10:15	
E-SD5-1	Sediment/ JASON STROUP	L/G	CN. (35)	6-499061 (Ice Only) (1)	E-SD5-1	S: 12/6/2011 9:30	
F-SD5-1	Sediment/ JASON STROUP	L/G	CN. (35)	6-475985 (Ice Only) (1)	F-SD5-1	S: 12/5/2011 15:05	
G-SD5-1	Sediment/ JASON STROUP	L/G	CN. (35)	6-475981 (Ice Only) (1)	G-SD5-1	S: 12/5/2011 12:05	
J-SD5-1	Sediment/ JASON STROUP	L/G	CN. (35)	6-499065 (Ice Only) (1)	J-SD5-1	S: 12/6/2011 8:45	
L-SD5-1	Sediment/ JASON STROUP	L/G	CN. (35)	6-475973 (Ice Only) (1)	L-SD5-1	S: 12/5/2011 11:30	
L-SD5-1 D	Sediment/ JASON STROUP	L/G	CN. (35)	6-475977 (Ice Only) (1)	L-SD5-1 D	S: 12/5/2011 11:30	
N-SD5-1	Sediment/ JASON STROUP	L/G	CN. (35)	6-475969 (Ice Only) (1)	N-SD5-1	S: 12/5/2011 10:35	
P-SD5-1	Sediment/ JASON STROUP	L/G	CN. (35)	6-475969 (Ice Only) (1)	P-SD5-1	S: 12/5/2011 16:30	

Shipment for Case Complete?	Sample(s) to be used for laboratory QC: N-SD5-1	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: -1°C	Chain of Custody Seal Number:
Analysis Key: CN = Cyanide.	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input type="checkbox"/>	Shipment Iced? <input type="checkbox"/>

TR Number: 6-574702950-120611-0007

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040
Client No:
SDG No:

L

Date Shipped: 12/7/2011 Carrier Name: FedEx Airbill: 7978 1277 1547 Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record Relinquished By: <i>[Signature]</i> (Date / Time) 12/7/11 10:00 Received By: <i>[Signature]</i> (Date / Time) 12/8/11 9:20 2 3 4	For Lab Use Only Lab Contract No: _____ Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____
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SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
E-SD5-1	Sediment/ JASON STROUP	L/G	VOA. (35)	6-499058 (Ice Only), 6-499059 (Ice Only) (2)	E-SD5-1	S: 12/6/2011 9:30	
K-SD5-1	Sediment/ DUANE THOMAS	L/G	VOA. (35)	6-499021 (Ice Only), 6-499022 (Ice Only) (2)	K-SD5-1	S: 12/6/2011 15:00	
O-SD5-1	Sediment/ DUANE THOMAS	L/G	VOA. (35)	6-499046 (Ice Only), 6-499047 (Ice Only) (2)	O-SD5-1	S: 12/7/2011 10:30	
O-SD5-1 D	Sediment/ DUANE THOMAS	L/G	VOA. (35)	6-499050 (Ice Only), 6-499051 (Ice Only) (2)	O-SD5-1 D	S: 12/7/2011 10:30	
Q-SD5-1	Sediment/ DUANE THOMAS	L/G	VOA. (35)	6-499025 (Ice Only), 6-499026 (Ice Only) (2)	Q-SD5-1	S: 12/7/2011 9:00	
TB-3	Water - Field QC/ SHEENA STYGER	L/G	VOA. (35)	6-499071 (HCL), 6-499072 (HCL), 6-499073 (HCL) (3)	TB-3	S: 12/7/2011 13:30	

Shipment for Case Complete? <input checked="" type="checkbox"/>	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): <i>[Signature]</i>	Cooler Temperature Upon Receipt: 1°C	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>
VOA = TCL Low VOA, VOA = TCL VOA				

TR Number: 6-574702950-120711-0005

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F2/51.047 Page 1 of 1

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Region 6 Laboratory
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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040

Client No:

SDG No:

L

Date Shipped: 12/7/2011 Carrier Name: FedEx Airbill: 7954 8232 5642 Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record Relinquished By: <u>Bill</u> (Date / Time): <u>12/7/11 1900</u> 2 3 4	Sampler Signature: <u>[Signature]</u> Received By: <u>Isiah Harris</u> (Date / Time): <u>12/8/11 9:20</u>	For Lab Use Only Lab Contract No: _____ Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____
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SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
B-SD5-1	Sediment/ JASON STROUP	L/G	VOA, (35)	6-499017 (Ice Only), 6-499018 (Ice Only) (2)	B-SD5-1	S: 12/6/2011 12:30	
C-SD5-1	Sediment/ JASON STROUP	L/G	VOA, (35)	6-499013 (Ice Only), 6-499014 (Ice Only) (2)	C-SD5-1	S: 12/6/2011 11:45	
D-SD5-1	Sediment/ JASON STROUP	L/G	VOA, (35)	6-499010 (Ice Only), 6-499011 (Ice Only) (2)	D-SD5-1	S: 12/6/2011 10:15	
J-SD5-1	Sediment/ JASON STROUP	L/G	VOA, (35)	6-499062 (Ice Only), 6-499063 (Ice Only) (2)	J-SD5-1	S: 12/6/2011 8:45	
P-SD5-1	Sediment/ JASON STROUP	L/G	VOA, (35)	6-475986 (Ice Only), 6-475987 (Ice Only) (2)	P-SD5-1	S: 12/5/2011 16:30	
TB-2	Water - Field QC/ JASON STROUP	L/G	VOA, (35)	6-499034 (HCL), 6-499035 (HCL), 6-499036 (HCL) (3)	TB-2	S: 12/6/2011 14:00	

Shipment for Case Complete? <input type="checkbox"/>	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: <u>1°C</u>	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input type="checkbox"/>	Shipment Iced? <input type="checkbox"/>
VOA = TCL Low VOA, VOA = TCL VOA				

TR Number: 6-574702950-120711-0003

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040
Client No:
SDG No:

L

Date Shipped: 12/7/2011 Carrier Name: FedEx Airbill: 7978 1277 2988 Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record Relinquished By: (Date / Time) Received By: (Date / Time) 2 3 4	Sampler Signature: [Signature] Received By: (Date / Time) 12/8/11 9:20	For Lab Use Only Lab Contract No: Unit Price: Transfer To: Lab Contract No: Unit Price:
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SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
D-SD5-1	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-499012 (Ice Only) (1)	D-SD5-1	S: 12/6/2011 10:15	
E-SD5-1	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-499060 (Ice Only) (1)	E-SD5-1	S: 12/6/2011 9:30	
F-SD5-1	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-475984 (Ice Only) (1)	F-SD5-1	S: 12/5/2011 15:05	
G-SD5-1	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-475980 (Ice Only) (1)	G-SD5-1	S: 12/5/2011 12:05	
J-SD5-1	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-499064 (Ice Only) (1)	J-SD5-1	S: 12/6/2011 8:45	
K-SD5-1	Sediment/ DUANE THOMAS	L/G	TM.Hg (35)	6-499023 (Ice Only) (1)	K-SD5-1	S: 12/6/2011 15:00	
L-SD5-1	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-475972 (Ice Only) (1)	L-SD5-1	S: 12/5/2011 11:30	
L-SD5-1 D	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-475976 (Ice Only) (1)	L-SD5-1 D	S: 12/5/2011 11:30	
N-SD5-1	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-475968 (Ice Only) (1)	N-SD5-1	S: 12/5/2011 10:35	
P-SD5-1	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-475988 (Ice Only) (1)	P-SD5-1	S: 12/5/2011 16:30	

Shipment for Case Complete? <input checked="" type="checkbox"/>	Sample(s) to be used for laboratory QC: N-SD5-1	Additional Sampler Signature(s): [Signature]	Cooler Temperature Upon Receipt: 1°C	Chain of Custody Seal Number:
Analysis Key: TM Hg = TAL Metals + Hg	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>

TR Number: 6-574702950-120711-0002

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Environmental Protection Agency
Region 6 Laboratory
10625 Fallstone Road, Houston, TX 77099
Phone: (281) 983-2100 Fax: (281) 983-2248



USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040

Client No:

SDG No:

L

Date Shipped: 12/8/2011	Carrier Name: FedEx	Airbill: 754 8756 7256	Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record	Sampler Signature: <i>[Signature]</i>	For Lab Use Only
				Relinquished By (Date / Time)	Received By (Date / Time)	Lab Contract No:
				1 <i>[Signature]</i> 12/8/11 1400	2 <i>[Signature]</i> 12/9/11 9:15	Unit Price:
				2		Transfer To:
				3		Lab Contract No:
				4		Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
ER-1	Water - Field QC/ JASON STROUP	L/G	CN (35)	6-499002 (NaOH), 6-499003 (NaOH) (2)	ER-1	S: 12/5/2011 18:00	
ER-2	Water - Field QC/ JASON STROUP	L/G	CN (35)	6-499033 (NaOH) (1)	ER-2	S: 12/6/2011 16:00	
ER-3	Water - Field QC/ JASON STROUP	L/G	CN (35)	6-499070 (NaOH) (1)	ER-3	S: 12/7/2011 15:00	

Shipment for Case Complete? <input checked="" type="checkbox"/>	Sample(s) to be used for laboratory QC: ER-1	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: -1°C	Chain of Custody Seal Number:
Analysis Key: CN = Cyanide	Concentration: L = Low, M = Low/Medium, H = High	Type Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>

TR Number: 6-574702950-120811-0004

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Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099

Phone: (281) 983-2100 Fax: (281) 983-2248



USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040

Client No:

SDG No:

L 2

Date Shipped: 12/8/2011 Carrier Name: FedEx Airbill: 7978 1801 9298 Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record Relinquished By: (Date / Time) Received By: (Date / Time) 2 3 4	Sampler Signature: [Signature] Received By: [Signature] Date / Time: 12/9/11 14:00 Date / Time: 12/9/11 9:15	For Lab Use Only Lab Contract No.: Unit Price: Transfer To: Lab Contract No.: Unit Price:
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SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
ER-1	Water - Field QC/ JASON STROUP	L/G	TM.Hg (35)	6-499000 (HNO ₃), 6-499001 (HNO ₃) (2)	ER-1	S: 12/5/2011 18:00	
ER-2	Water - Field QC/ JASON STROUP	L/G	TM.Hg (35)	6-499032 (HNO ₃) (1)	ER-2	S: 12/6/2011 16:00	
ER-3	Water - Field QC/ JASON STROUP	L/G	TM.Hg (35)	6-499068 (HNO ₃) (1)	ER-3	S: 12/7/2011 15:00	

Shipment for Case Complete? <input checked="" type="checkbox"/>	Sample(s) to be used for laboratory QC: ER-1	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 1°C	Chain of Custody Seal Number:
Analysis Key: TM.Hg = TAL Metals + Hg	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input checked="" type="checkbox"/>	Shipment Iced? <input checked="" type="checkbox"/>

TR Number: 6-574702950-120811-0003

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040

Client No:

SDG No:

L

Date Shipped: 12/8/2011 Carrier Name: FedEx Airbill: 7978-1802 0604 Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record Relinquished By: <u>Shel</u> (Date / Time) <u>12/8/11 1400</u> 2 3 4	Sampler Signature: <u>[Signature]</u> Received By: <u>Isaac Harris</u> (Date / Time) <u>12/9/11 9:15</u>	For Lab Use Only Lab Contract No: _____ Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____
--	---	--	---

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
ER-3	Water - Field QC/ JASON STROUP	L/G	VOA (35)	6-499066 (HCL), 6-499067 (HCL), 6-499068 (HCL) (3)	ER-3	S: 12/7/2011 15:00	
FB-3	Water - Field QC/ DUANE THOMAS	L/G	VOA (35)	6-499076 (HCL), 6-499077 (HCL), 6-499078 (HCL) (3)	FB-3	S: 12/7/2011 14:40	

Shipment for Case Complete?	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): <u>[Signature]</u>	Cooler Temperature Upon Receipt: <u>-1°C</u>	Chain of Custody Seal Number:
Analysis Key: VOA = TCL Low VOA	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input type="checkbox"/>	Shipment Iced? <input type="checkbox"/>

TR Number: 6-574702950-120811-0005

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10625 Fallstone Road, Houston, TX 77099
Phone: (281) 983-2100 Fax: (281) 983-2248



USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040
Client No:
SDG No:

L

Date Shipped: 12/8/2011 Carrier Name: FedEx Airbill: 7975 1903 0884 Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record Relinquished By (Date / Time) 1 <i>Stell</i> 12/8/11 1400 2 3 4	Sampler Signature: <i>[Signature]</i> Received By (Date / Time) <i>Isach Harris</i> 12/9/11 9:15	For Lab Use Only Lab Contract No: _____ Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____
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SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
A-SD5-1	Sediment/ DUANE THOMAS	L/G	TM.Hg (35)	6-499056 (Ice Only) (1)	A-SD5-1	S: 12/7/2011 11:45	
B-SD5-1	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-499019 (Ice Only) (1)	B-SD5-1	S: 12/6/2011 12:30	
C-SD5-1	Sediment/ JASON STROUP	L/G	TM.Hg (35)	6-499015 (Ice Only) (1)	C-SD5-1	S: 12/6/2011 11:45	
H-SD5-1	Sediment/ DUANE THOMAS	L/G	TM.Hg (35)	6-499083 (Ice Only) (1)	H-SD5-1	S: 12/7/2011 14:35	
M-SD5-1	Sediment/ DUANE THOMAS	L/G	TM.Hg (35)	6-499044 (Ice Only) (1)	M-SD5-1	S: 12/7/2011 9:45	
O-SD5-1	Sediment/ DUANE THOMAS	L/G	TM.Hg (35)	6-499048 (Ice Only) (1)	O-SD5-1	S: 12/7/2011 10:30	
O-SD5-1 D	Sediment/ DUANE THOMAS	L/G	TM.Hg (35)	6-499052 (Ice Only) (1)	O-SD5-1 D	S: 12/7/2011 10:30	
Q-SD5-1	Sediment/ DUANE THOMAS	L/G	TM.Hg (35)	6-499027 (Ice Only) (1)	Q-SD5-1	S: 12/7/2011 9:00	
R-SD5-1	Sediment/ DUANE THOMAS	L/G	TM.Hg (35)	6-499087 (Ice Only) (1)	R-SD5-1	S: 12/7/2011 15:10	
S-SD5-1	Sediment/ DUANE THOMAS	L/G	TM.Hg (35)	6-499091 (Ice Only) (1)	S-SD5-1	S: 12/7/2011 15:35	

Shipment for Case Complete? <input type="checkbox"/>	Sample(s) to be used for laboratory QC: _____	Additional Sampler Signature(s): <i>[Signature]</i>	Cooler Temperature Upon Receipt: <i>0°C</i>	Chain of Custody Seal Number: _____
Analysis Key: TM Hg = TAL Metals + Hg	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input type="checkbox"/>	Shipment Iced? <input type="checkbox"/>

TR Number: 6-574702950-120811-0010

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USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 42040

Client No:

SDG No:

L

Date Shipped: 12/8/2011 Carrier Name: FedEx Airbill: 7954 8826 6729 Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record Relinquished By: <u>SWL</u> (Date / Time): <u>12/8/11 1400</u> 2 3 4 Received By: <u>Isach Harris</u> (Date / Time): <u>12/9/11 9:15</u>	For Lab Use Only Lab Contract No: _____ Unit Price: _____ Transfer To: _____ Lab Contract No: _____ Unit Price: _____
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SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
A-SD5-1	Sediment/ DUANE THOMAS	L/G	VOA (35)	6-499054 (Ice Only), 6-499055 (Ice Only) (2)	A-SD5-1	S: 12/7/2011 11:45	
H-SD5-1	Sediment/ DUANE THOMAS	L/G	VOA (35)	6-499081 (Ice Only), 6-499082 (Ice Only) (2)	H-SD5-1	S: 12/7/2011 14:35	
M-SD5-1	Sediment/ DUANE THOMAS	L/G	VOA (35)	6-499042 (Ice Only), 6-499043 (Ice Only) (2)	M-SD5-1	S: 12/7/2011 9:45	
R-SD5-1	Sediment/ DUANE THOMAS	L/G	VOA (35)	6-499085 (Ice Only), 6-499086 (Ice Only) (2)	R-SD5-1	S: 12/7/2011 15:10	
S-SD5-1	Sediment/ DUANE THOMAS	L/G	VOA (35)	6-499089 (Ice Only), 6-499090 (Ice Only) (2)	S-SD5-1	S: 12/7/2011 15:35	
TB-4	Water - Field QC/ SHEENA STYGER	L/G	VOA (35)	6-499103 (HCL), 6-499104 (HCL), 6-499105 (HCL) (3)	TB-4	S: 12/8/2011 9:00	

Shipment for Case Complete? <u>Y</u>	Sample(s) to be used for laboratory QC: _____	Additional Sampler Signature(s): <u>SWL</u>	Cooler Temperature Upon Receipt: <u>-1°C</u>	Chain of Custody Seal Number: _____
Analysis Key: _____	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <u> </u>	Shipment Iced? <u> </u>
VOA = TCL Low VOA, VOA = TCL VOA				

TR Number: 6-574702950-120811-0007

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Environmental Protection Agency

Region 6 Laboratory

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USEPA Contract Laboratory Program Generic Chain of Custody

Reference Case 42040

Client No:

SDG No:

L

Date Shipped: 12/8/2011	Carrier Name: FedEx	Account No: 79548585457	Shipped to: U.S. EPA Region 6 Laboratory 10625 Fallstone Road Houston TX 77099 (281) 983-2137	Chain of Custody Record	Sampler Signature: [Signature]	Received By: [Signature]	For Lab Use Only
				Relinquished By (Date / Time)	Received By (Date / Time)		Lab Contract No:
				1 [Signature] 12/5/11 14:00	Said Harris 12/6/11 9:15		Unit Price:
				2			Transfer To:
				3			Lab Contract No:
				4			Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
A-SD5-1	Sediment/ DUANE THOMAS	L/G	CN (35)	6-499057 (Ice Only) (1)	A-SD5-1	S: 12/7/2011 11:45	
B-SD5-1	Sediment/ JASON STROUP	L/G	CN (35)	6-499020 (Ice Only) (1)	B-SD5-1	S: 12/6/2011 12:30	
H-SD5-1	Sediment/ DUANE THOMAS	L/G	CN (35)	6-499084 (Ice Only) (1)	H-SD5-1	S: 12/7/2011 14:35	
K-SD5-1	Sediment/ DUANE THOMAS	L/G	CN (35)	6-499024 (Ice Only) (1)	K-SD5-1	S: 12/6/2011 15:00	
M-SD5-1	Sediment/ DUANE THOMAS	L/G	CN (35)	6-499045 (Ice Only) (1)	M-SD5-1	S: 12/7/2011 9:45	
O-SD5-1	Sediment/ DUANE THOMAS	L/G	CN (35)	6-499049 (Ice Only) (1)	O-SD5-1	S: 12/7/2011 10:30	
O-SD5-1 D	Sediment/ DUANE THOMAS	L/G	CN (35)	6-499053 (Ice Only) (1)	O-SD5-1 D	S: 12/7/2011 10:30	
Q-SD5-1	Sediment/ DUANE THOMAS	L/G	CN (35)	6-499028 (Ice Only) (1)	Q-SD5-1	S: 12/7/2011 9:00	
R-SD5-1	Sediment/ DUANE THOMAS	L/G	CN (35)	6-499088 (Ice Only) (1)	R-SD5-1	S: 12/7/2011 15:10	
S-SD5-1	Sediment/ DUANE THOMAS	L/G	CN (35)	6-499092 (Ice Only) (1)	S-SD5-1	S: 12/7/2011 15:35	

Shipment for Case Complete Yr	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): [Signature]	Cooler Temperature Upon Receipt: 1°C	Chain of Custody Seal Number:
Analysis Key: CN = Cyanide	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? <input type="checkbox"/>	Shipment Iced? <input type="checkbox"/>

TR Number: 6-574702950-120811-0011

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7/25/04 Page 1 of 1



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Notes and Definitions

The units for surrogates on VOA solid samples are reported in $\mu\text{g/L}$ instead of the expected $\mu\text{g/Kg}$ for a solid sample. The difference is because the surrogate spiking procedure is a post sample preparation addition, and the units are based on the concentration of the surrogate in the diluted extract, not the solid sample.

L	The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
K	The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
B	Blank Related - The concentration found in the sample was less than 10X the concentration found in the associated extraction, digestion and/or analysis blank. Presence in the sample is therefore suspect.
A	This sample was extracted at a single acid pH.
HTS	Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.
AES	Atomic Emission Spectrometer
CVAA	Cold Vapor Atomic Absorption
ECD	Electron Capture Detector
GC	Gas Chromatograph
GFAA	Graphite Furnace Atomic Absorption
ICP	Inductively Coupled Plasma
MS	Mass Spectrometer
NA	Not Applicable
NPD	Nitrogen Phosphorous Detector
NR	Not Reported
TCLP	Toxicity Characteristic Leaching Procedure
U	Undetected
#	Out of QC limits

Initial pressure in air analyses is the pressure at which the canister was received in psia (pounds *per* square inch absolute pressure).



Environmental Protection Agency
Region 6 Laboratory

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The pH reported for Volatile liquid samples was tested using a 0-14 pH indicator strip for the purpose of verifying chemical preservation.

The statistical software used for the reporting of toxicity data is ToxCalc 5.0.32, Environmental Toxicity Data Analysis System 1994-2007 Tidepool Scientific Software.

ATTACHMENT 6

DREDGE MATERIAL LAB REPORT



Environmental & Industrial Hygiene Services

3082 25th Street, Port Arthur, Texas 77642 • (409) 983-4575 FAX (409) 982-1522
5544 Leopard Street, Corpus Christi, Texas 78408 • (361) 299-9900 FAX (361) 299-1155
138 S. Cities Service Hwy., Sulphur, Louisiana 70663 • (337) 626-2121 FAX (337) 626-2126
December 3, 2011

Mr. Randy Cooper
Tubal-Cain Industries
P. O. Box 2393
Beaumont, TX 77704

Ref: Project No. 2-1-8320, Environmental, Soil/Solid Samples, Received 1/6/2011

Dear Mr. Cooper:

I am writing this letter as a follow up to our telephonic conversation. The three soil samples (#1 Soil, #2 Soil, #3 Soil) received from you on January 6, 2011 were analyzed for: TPH, TCLP-Metals, and Total RCRA Metals as per your request on the chain of custody. We have sent you the report on January 17, 2011.

TPH:

As you can see from the attached report, TPH was not detected (below reporting limit) in Soil #1 and Soil #3. Whereas, Soil #2 contained a total TPH of 121 mg/kg which is very low in my opinion and should not be of much concern.

Total RCRA Metals:

The results of analyses show that except for Lead, all other RCRA Metals are either not detected (below reporting limit) or present in very low concentration (below the levels present in virgin background soil samples). Lead concentrations in all the soil samples (64 mg/kg in Soil #1; 37 mg/kg in Soil #2 & 78 mg/kg in Soil #3) are above background concentration (see attached Table 3, Texas-Specific Background Concentration).

TCLP-Metals:

All the TCLP (Toxicity Characteristic Leaching Procedure) Metals are not detected (below reporting limit) and are below regulatory limit and should not be of concern.

We appreciate your business and free to call us if you have further questions and can be of further service to you.

Sincerely,

Dr. C. N. Reddy, PH.D, CIH, ASP
Director

Client: Tubal-Cain Industries
 P.O. Box 2393
 Beaumont, TX 77704

Attn: Mr. Randy Cooper
 Phone: 786-1783 ext. 128; Fax: 786-2756
 Email: safety@tubal.cain.com, cade@tcmarineservices.com

Reporting Date: 01/17/11
 Sample Matrix: Solid
 Date Collected: 01/06/11
 Time Collected: See Below
 Collected by: Randy Cooper
 Date Received: 01/06/11
 Time Received: 4:20pm
 CHEMTEX File #: P11010177

RESULTS OF ANALYSIS

PROJECT NO: 2-1-8320

PROJECT: Environmental

SITE/LOCATION: 8700 Yacht Club Rd.

CHEMTEX ID	Sample ID	Parameter	Units	Results	RL	Qual
P11010177	#1 Soil (15:00)	Total Metals*				
		Total Arsenic	mg/kg	4	2.5	
		Total Barium	mg/kg	65	2.5	
		Total Cadmium	mg/kg	<2.5	2.5	
		Total Chromium	mg/kg	11	2.5	
		Total Lead	mg/kg	64	2.5	
		Total Selenium	mg/kg	<2.5	2.5	
		Total Silver	mg/kg	<2.5	2.5	
		Total Mercury	mg/kg	<0.2	0.2	
		T P H C ₆ -C ₁₂	mg/kg	<50	--	
		T P H >C ₁₂ -C ₂₈	mg/kg	<50	--	
		T P H >C ₂₈ -C ₃₅	mg/kg	<50	--	
		T P H C ₆ -C ₃₅	mg/kg	<50	50	
P11010178	#2 Soil (15:05)	Total Metals*				
		Total Arsenic	mg/kg	3.7	2.5	
		Total Barium	mg/kg	65	2.5	
		Total Cadmium	mg/kg	<2.5	2.5	
		Total Chromium	mg/kg	7.6	2.5	
		Total Lead	mg/kg	37	2.5	
		Total Selenium	mg/kg	<2.5	2.5	
		Total Silver	mg/kg	<2.5	2.5	
		Total Mercury	mg/kg	<0.2	0.2	
		T P H C ₆ -C ₁₂	mg/kg	<50	--	
		T P H >C ₁₂ -C ₂₈	mg/kg	96	--	
		T P H >C ₂₈ -C ₃₅	mg/kg	<50	--	
		T P H C ₆ -C ₃₅	mg/kg	121	50	

RL: Reporting Limit.

Analysis performed and report generated at CHEMTEX, Port Arthur, TX.

*Analysis performed at CHEMTEX, Sulphur, LA and report is generated at CHEMTEX, Port Arthur, TX.

Qualifier Definition:

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Environmental & Industrial Hygiene Services

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138 S. Cities Service Hwy., Sulphur, Louisiana 70663 • (337) 626-2121 FAX (337) 626-2126

Client: Tubal-Cain Industries
P.O. Box 2393
Beaumont, TX 77704

Attn: Mr. Randy Cooper
Phone: 786-1783 ext. 128; Fax: 786-2756
Email: safety@tubal.cain.com, cade@tcmarineservices.com

Reporting Date: 01/17/11
Sample Matrix: Solid
Date Collected: 01/06/11
Time Collected: See Below
Collected by: Randy Cooper
Date Received: 01/06/11
Time Received: 4:20pm
CHEMTEX File #: P11010177

RESULTS OF ANALYSIS

PROJECT NO: 2-1-8320

PROJECT: Environmental

SITE/LOCATION: 8700 Yacht Club Rd.

CHEMTEX ID	Sample ID	Parameter	Units	Results	RL	Qual
P11010179	#3 Soil (15:10)	Total Metals*				
		Total Arsenic	mg/kg	3.2	2.5	
		Total Barium	mg/kg	65	2.5	
		Total Cadmium	mg/kg	<2.5	2.5	
		Total Chromium	mg/kg	9.6	2.5	
		Total Lead	mg/kg	78	2.5	
		Total Selenium	mg/kg	<2.5	2.5	
		Total Silver	mg/kg	<2.5	2.5	
		Total Mercury	mg/kg	<0.2	0.2	
		TPH C ₆ -C ₁₂	mg/kg	<50	---	
		TPH >C ₁₂ -C ₂₈	mg/kg	<50	---	
		TPH >C ₂₈ -C ₃₅	mg/kg	<50	---	
		TPH C ₆ -C ₃₅	mg/kg	<50	50	

RL: Reporting Limit.

Analysis performed and report generated at CHEMTEX, Port Arthur, TX.

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Reporting Date: 01/17/11
Sample Matrix: Solid
Date Collected: 01/06/11
Time Collected: 15:00
Collected by: Randy Cooper
Date Received: 01/06/11
Time Received: 4:20pm
CHEMTEX File #: P11010177

RESULTS OF ANALYSIS

PROJECT NO: 2-1-8320

PROJECT: Environmental

SITE/LOCATION: 8700 Yacht Club Rd.

SAMPLE ID: #1 Soil

CHEMTEX #: P11010177

Test Method	Parameter	Units	Results	RL	Reg Limit	Qual
EPA 1311/6010B	TCLP Arsenic	mg/L	<0.05	0.05	5.0	
	TCLP Barium	mg/L	<0.17	0.17	100.0	
	TCLP Cadmium	mg/L	<0.05	0.05	1.0	
	TCLP Chromium	mg/L	<0.05	0.05	5.0	
	TCLP Lead	mg/L	<0.05	0.05	5.0	
	TCLP Selenium	mg/L	<0.06	0.06	1.0	
EPA 1311/7470A	TCLP Silver	mg/L	<0.05	0.05	5.0	
	TCLP Mercury	mg/L	<0.002	0.002	0.2	

RL: Reporting Limit.

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Attn: Mr. Randy Cooper
Phone: 786-1783 ext. 128; Fax: 786-2756
Email: safety@tubal.cain.com, cade@tcmarineservices.com

Reporting Date: 01/17/11
Sample Matrix: Solid
Date Collected: 01/06/11
Time Collected: 15:05
Collected by: Randy Cooper
Date Received: 01/06/11
Time Received: 4:20pm
CHEMTEX File #: P11010177

RESULTS OF ANALYSIS

PROJECT NO: 2-1-8320
PROJECT: Environmental
SITE/LOCATION: 8700 Yacht Club Rd.
SAMPLE ID: #2 Soil
CHEMTEX #: P11010178

Test Method	Parameter	Units	Results	RL	Reg Limit	Qual
EPA 1311/6010B	TCLP Arsenic	mg/L	<0.05	0.05	5.0	
	TCLP Barium	mg/L	0.20	0.17	100.0	
	TCLP Cadmium	mg/L	<0.05	0.05	1.0	
	TCLP Chromium	mg/L	<0.05	0.05	5.0	
	TCLP Lead	mg/L	<0.05	0.05	5.0	
	TCLP Selenium	mg/L	<0.06	0.06	1.0	
EPA 1311/7470A	TCLP Silver	mg/L	<0.05	0.05	5.0	
	TCLP Mercury	mg/L	<0.002	0.002	0.2	

RL: Reporting Limit.

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Reporting Date: 01/17/11
Sample Matrix: Solid
Date Collected: 01/06/11
Time Collected: 15:10
Collected by: Randy Cooper
Date Received: 01/06/11
Time Received: 4:20pm
CHEMTEX File #: P11010177

RESULTS OF ANALYSIS

PROJECT NO: 2-1-8320

PROJECT: Environmental

SITE/LOCATION: 8700 Yacht Club Rd.

SAMPLE ID: #3 Soil

CHEMTEX #: P11010179

Test Method	Parameter	Units	Results	RL	Reg Limit	Qual
EPA 1311/6010B	TCLP Arsenic	mg/L	<0.05	0.05	5.0	
	TCLP Barium	mg/L	<0.17	0.17	100.0	
	TCLP Cadmium	mg/L	<0.05	0.05	1.0	
	TCLP Chromium	mg/L	<0.05	0.05	5.0	
	TCLP Lead	mg/L	<0.05	0.05	5.0	
	TCLP Selenium	mg/L	<0.06	0.06	1.0	
EPA 1311/7470A	TCLP Silver	mg/L	<0.05	0.05	5.0	
	TCLP Mercury	mg/L	<0.002	0.002	0.2	

RL: Reporting Limit.

Analysis performed and report generated at CHEMTEX, Port Arthur, TX.

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Client: Tubal-Cain Industries
 P.O. Box 2393
 Beaumont, TX 77704

Reporting Date: 01/17/11
 CHEMTEX File #: P11010177

LABORATORY QUALITY CONTROL DATA

Method Blank (mg/kg)					
QC Batch ID	Parameter	CAS #	Result	RL	Qual
Qb TPH 011011	T P H C ₆ -C ₃₅		<50	50	
QbMC011711	Arsenic	7440-38-2	<2.50	2.50	
	Barium	7440-39-3	<2.50	2.50	
	Cadmium	7440-43-9	<2.50	2.50	
	Chromium	7440-47-3	<2.50	2.50	
	Lead	7439-92-1	<2.50	2.50	
	Selenium	7782-49-2	<2.50	2.50	
	Silver	7440-22-4	<2.50	2.50	
QbHgC011311-1	Mercury	7439-97-6	<0.20	0.20	

Duplicate (mg/kg)							
QC Batch ID	QC Sample ID	Parameter	Sample Result	Sample Dup Result	RPD	RPD Limit	Qual
Qb TPH 011011	P11010178	T P H C ₆ -C ₁₂	9	8	6	20	
		T P H >C ₁₂ -C ₂₈	96	75	25	20	R5
		T P H >C ₂₈ -C ₃₅	16	16	0	20	
		T P H C ₆ -C ₃₅	121	99	20	20	
QbMC011711	P11010178	Arsenic	3.7	4	7.2	20	
		Barium	65	65	0	20	
		Cadmium	<2.5	<2.5	—	20	R8
		Chromium	7.6	7.6	0	20	
		Lead	37	37	0	20	
		Selenium	<2.5	<2.5	—	20	R8
		Silver	<2.5	<2.5	—	20	R8
QbHgC011311-1	P11010179	Mercury	<0.2	<0.2	—	20	R8

Qualifier Definition:

R5: Sample RPD exceeds control limits.

R8: RPD not calculated due to division by zero.

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Client: Tubal-Cain Industries
 P.O. Box 2393
 Beaumont, TX 77704

Reporting Date: 01/17/11
 CHEMTEX File #: P11010177

LABORATORY QUALITY CONTROL DATA

		LCS and LCSD (mg/kg)								
QC Batch ID	Parameter	Spk	LCS	LCS	LCSD	LCSD	RPD	RPD	% Rec	Qual
		Added	Result	% Rec	Result	% Rec		Limit	Limit	
Qb TPH 011011	T P H C ₆ -C35	250	232	93	244	98	5	20	75-125	
QbMC011711	Arsenic	50.00	50.4	101	---	---	---	---	80-120	
	Barium	50.00	53.3	107	---	---	---	---	80-120	
	Cadmium	50.00	51.0	102	---	---	---	---	80-120	
	Chromium	50.00	50.3	101	---	---	---	---	80-120	
	Lead	50.00	50.5	101	---	---	---	---	80-120	
	Selenium	50.00	50.6	101	---	---	---	---	80-120	
	Silver	50.00	52.4	105	---	---	---	---	80-120	
QbHgC011311-1	Mercury	0.50	0.51	103	---	---	---	---	83-117	

			MS and MSD (mg/kg)							
Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Result	MSD % Rec	RPD	RPD Limit	% Rec Limit	Qual
QCBatch ID: QbMC011711										
QC Sample ID: P11010178										
Arsenic	3.7	100	86	86	---	---	---	---	70-130	
Barium	65	100	153	88	---	---	---	---	70-130	
Cadmium	<2.5	100	83	83	---	---	---	---	70-130	
Chromium	7.6	100	88	80	---	---	---	---	70-130	
Lead	37	100	112	75	---	---	---	---	70-130	
Selenium	<2.5	100	80	80	---	---	---	---	70-130	
Silver	<2.5	100	76	76	---	---	---	---	70-130	

QCBatch ID: QbHgC011311-1

QC Sample ID: P1101079

Mercury	<0.2	0.50	0.42	85	---	---	---	---	80-120
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QCBatch ID: Qb TPH 011011

QC Sample ID: P11010179

T P H C ₆ -C35	5	250	288	115	---	---	---	---	75-125
---------------------------	---	-----	-----	-----	-----	-----	-----	-----	--------

Qualifier Definition:

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Client: Tubal-Cain Industries
 P.O. Box 2393
 Beaumont, TX 77704

Reporting Date: 01/17/11
 CHEMTEX File #: P11010177

LABORATORY QUALITY CONTROL DATA

Method Blank (mg/L)					
QC Batch ID	Parameter	CAS#	Result	RL	Qual
QbM07A0101711	TCLP Metals				
	Arsenic	7440-38-2	<0.05	0.05	
	Barium	7440-39-3	<0.17	0.17	
	Cadmium	7440-43-9	<0.05	0.05	
	Chromium	7440-47-3	<0.05	0.05	
	Lead	7439-92-1	<0.05	0.05	
	Selenium	7782-49-2	<0.06	0.06	
QbHgC011211	Silver	7440-22-4	<0.05	0.05	
	Mercury	7439-97-6	<0.002	0.002	

Duplicate (mg/L)							
QC Batch ID	QC Sample ID	Parameter	Sample Result	Sample Dup Result	RPD	RPD Limit	Qual
QbM07A0101711	P11010180	TCLP Metals					
		Arsenic	<0.05	<0.05	---	20	R8
		Barium	<0.17	<0.17	---	20	R8
		Cadmium	<0.05	<0.05	---	20	R8
		Chromium	<0.05	<0.05	---	20	R8
		Lead	<0.05	<0.05	---	20	R8
		Selenium	<0.06	<0.06	---	20	R8
QbHgC011211	P11010179	Silver	<0.05	<0.05	---	20	R8
		Mercury	<0.002	<0.002	---	20	R8

LCS and LCSD (mg/L)									
QC Batch ID	Parameter	Spk Added	LCS Result	LCS % Rec	LCSD Result	LCSD % Rec	RPD	RPD Limit	% Rec Limit
QbM07A0101711	TCLP Metals								
	Arsenic	0.500	0.518	104	---	---	---	---	87-113
	Barium	0.500	0.480	96	---	---	---	---	90-110
	Cadmium	0.500	0.535	107	---	---	---	---	88-112
	Chromium	0.500	0.538	108	---	---	---	---	83-117
	Lead	0.500	0.530	106	---	---	---	---	85-115
	Selenium	0.500	0.447	89	---	---	---	---	88-112
QbHgC011211	Silver	0.500	0.521	104	---	---	---	---	92-108
	Mercury	0.0050	0.0045	91	---	---	---	---	83-117

Qualifier Definition:

R8: RPD not calculated due to division by zero.

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 P.O. Box 2393
 Beaumont, TX 77704

Reporting Date: 01/17/11
 CHEMTEX File #: P11010177

LABORATORY QUALITY CONTROL DATA

TCLP Metals

MS and MSD (mg/L)

Parameter	Sample Result	MS Spk Added	MS Result	MS % Rec	MSD Result	MSD % Rec	RPD	RPD Limit	% Rec Limit	Qual
QCBatch ID: QbM07A0101711										
QC Sample ID: P11010180										
Arsenic	<0.05	1.000	0.837	84	--	--	--	--	70-130	
Barium	<0.17	1.000	0.705	70	--	--	--	--	70-130	
Cadmium	<0.05	1.000	0.746	75	--	--	--	--	70-130	
Chromium	<0.05	1.000	0.767	77	--	--	--	--	70-130	
Lead	<0.05	1.000	0.747	75	--	--	--	--	70-130	
Selenium	<0.06	1.000	0.860	86	--	--	--	--	70-130	
Silver	<0.05	1.000	0.736	74	--	--	--	--	70-130	

QCBatch ID: QbHgC011211

QC Sample ID: P11010179

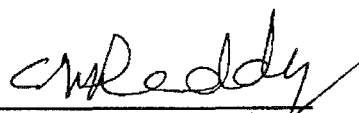
Mercury	<0.002	0.005	0.0043	85	--	--	--	--	70-130	
---------	--------	-------	--------	----	----	----	----	----	--------	--

Qualifier Definition:

M2: Matrix Spike recovery is below control limits due to matrix interference.

Method References/Analysis Dates & Analysts

Parameter	Method Reference	Date Analyzed/Analyzed By
T P H C ₆ -C ₃₅	TNRCC Method 1005 (Rev. 03)	01/10/11 TRS
TCLP Metals	EPA 1311/6010B	01/17/11 RS
TCLP Mercury	EPA 1311/7470A	01/12/11 RS
Total Metals		
Total Arsenic	EPA Method 6010B	01/17/11 SS
Total Cadmium	EPA Method 6010B	01/17/11 SS
Total Chromium	EPA Method 6010B	01/17/11 SS
Total Copper	EPA Method 6010B	01/17/11 SS
Total Nickel	EPA Method 6010B	01/17/11 SS
Total Lead	EPA Method 6010B	01/17/11 SS
Total Zinc	EPA Method 6010B	01/17/11 SS
Total Mercury	EPA Method 7471A	01/13/11 RS


 Dr. C. N. Reddy, Ph.D, CIH, ASP
 Director

amd/kmt*/CNR

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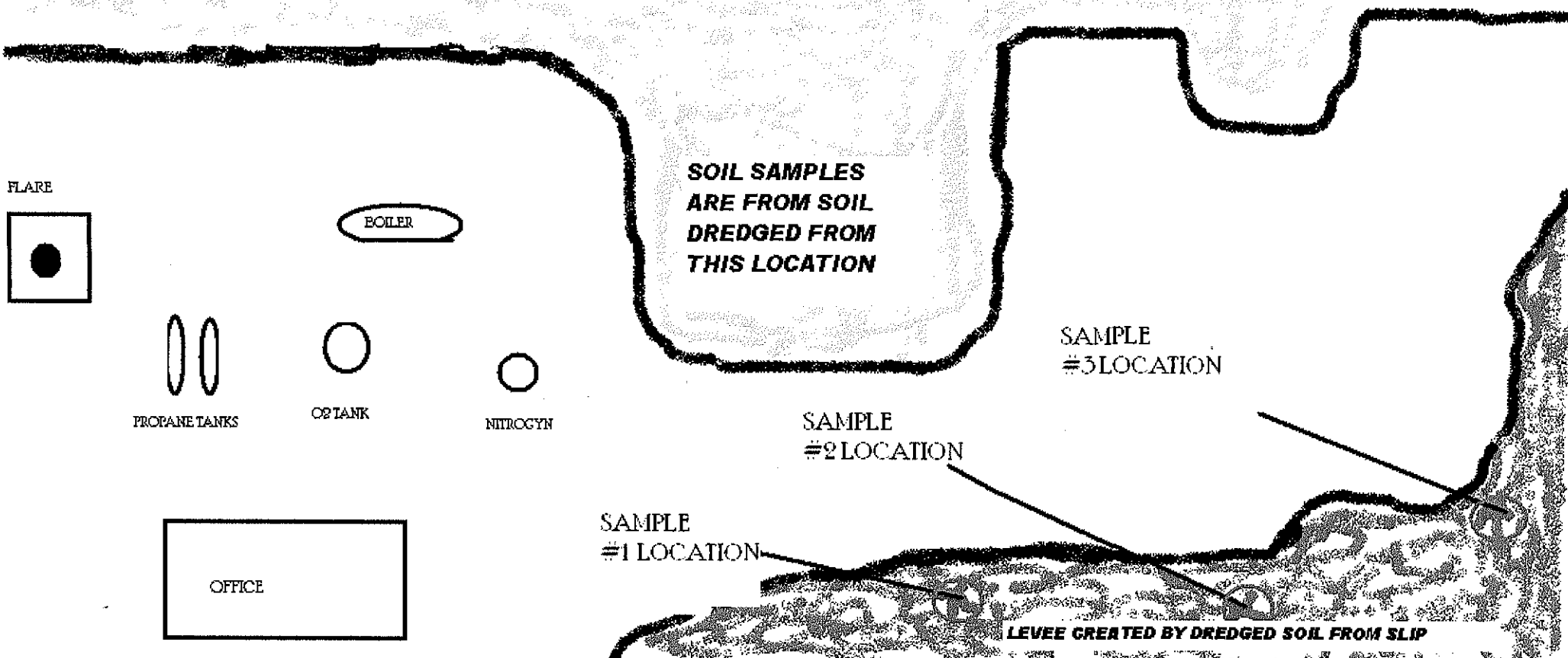
CHAIN OF CUSTODY RECORD
ENVIRONMENTAL
ANALYTICAL SERVICES REQUEST

CLIENT: Tubal-Cain Industries ATTN: Randy Cooper				ADDRESS: P.O. Box 2393 Beaumont, TX 77704				Phone: (409) 786-1783 ext. 128 Fax: (409) 786-2756 Email: safety@tubal.cain.com												
BILLING CONTACT/ADDRESS: (If different from above)				P. O. #: 40341		PROJECT NO: 2-1-8320		PROJECT: ENVIRONMENTAL		SITE/LOCATION: 8700 YACHT CLUB RD										
SAMPLE(S) COLLECTED BY (PRINT NAME): RANDY COOPER				Expected Turnaround Time 2-4 hr Rush _____ 24 hr Rush _____ 48 hr Rush _____ 7-14days _____				REQUESTED ANALYSES												
Sample Matrix Codes: Drinking Water: DW; Groundwater: GW; Liquid Waste: LW; Oil(s): O; Paint Chips: PC; Sand: Sn; Sludge: SI; Soil/Solid: S; Solid Waste: SW; Trip Blank: TB; Water: W; Wipes: WP; Wastewater: WW																				
CHEMTEX #	SAMPLE IDENTIFICATION	COLLECTION		Sample Matrix	Composite/Grab	Chemical Preservative	Sample Containers													
		Date	Time				No.	Size (oz.)	Type (Glass/Plastic)											
P11010177	#1 SOIL	1-6-11	1500	Solid	GRAB	N/A	1		G											
P11010178	#2 SOIL	1-6-11	1505	Solid	GRAB	N/A	21		G											
P11010179	#3 SOIL	1-6-11	1510	Solid	GRAB	N/A	31		G											
Remarks: Samples must be preserved on ice after sample collection and transported in ice chest.							Regulatory		<input checked="" type="checkbox"/>		Non-Regulatory									
Relinquished By: <i>Randy Cooper</i>				Date/Time: 1-6-11 1620		Received By: <i>Missie Lugo</i>				Date/Time: 01/06/10 4:20pm										
Relinquished By:				Date/Time:		Received By:				Date/Time:										

Facilities also available at: 5544 Leopard St., Corpus Christi, TX 78408; (361)299-9900 chemtexcc@sbcglobal.net and 138 S. Cities Service Hwy., Sulphur, LA 70663 (337) 626-2121 chemtexlc@sbcglobal.net

NOTICE / DISCLAIMER: Client has asked Chemtex to perform the analyses listed above, on the samples described herein. Any analytical results, opinions or interpretations which may be provided to Client are based upon the information and material supplied by Client, for whose exclusive and confidential use a report will be made. No person or entity other than Client may rely on any such report. Any such reliance will be unjustified. Any person, other than Client, that reads or relies on any such report, does so at his or her own risk. Chemtex makes no warranty or representation, express or implied, of any type, and expressly disclaims same. Any report provided by Chemtex shall not be reproduced, in whole or in part, without the written approval of Chemtex. In no event shall Chemtex be responsible for any damage greater than the amount that it received for performing some or all of the analyses listed above.

8700 YACHT CLUB ROAD SOIL SAMPLE LOCATIONS 1-6-2011





Environmental & Industrial Hygiene Services

3082 25th Street, Port Arthur, Texas 77642 • (409) 983-4575 FAX (409) 982-1522
5544 Leopard Street, Corpus Christi, Texas 78408 • (361) 299-9900 FAX (361) 299-1155
138 S. Cities Service Hwy., Sulphur, Louisiana 70663 • (337) 626-2121 FAX (337) 626-2126

INVOICE

DATE	INVOICE #
1/18/2011	142397

Bill To:

Tubal-Cain Industries
c/o Randy Cooper/Accts Payable
P. O. Box 2393
Beaumont, TX 77704

*Entered
1-19-11*

Mail Payment To:

CHEMTEX
P. O. Box 3922
Port Arthur, TX 77643

P.O. NO.		Terms	Due Date	Today's Date	CHEMTEX DATA NO:	
40341		Net 30 Days	2/17/2011	1/18/2011	P11010177-179	
Quantity	Description				Rate	Amount
	Project No: 2-1-8320 Project: Environmental Site/Location: 8700 Yacht Club Rd. Sample IDs: #1 to #3 Soil Received 01/06/11 for Mr. Randy Cooper & Analyzed for:					
3	Total Metals (As,Ba,Cd,Cr,Pb,Hg,Se&Ag)				225.00	675.00
3	T P H				75.00	225.00
3	TCLP Metals Including Extraction				275.00	825.00
Thank you for your business. Please remit payment to the above address.					Total	\$1,725.00

Finance Charge of 1 1/2% per month if full amount is not received within 30 days of invoice date. Client agrees to pay attorneys fees if legal collection is necessary.

"We Provide Best Quality Service At A Very Reasonable Price"

Tubal-Cain Marine Services, Inc.
Vendor: CHEMTEX

Check Date: February 16, 2011 **32731**

INVOICE DATE	INVOICE NO	DESCRIPTION	INV. AMOUNT	DISCNT TAKEN	BALANCE
1-18-11	142397	40341	1725.00	.00	1725.00
Chk. Date	2-16-11	Chk. No.	32731	Totals	1725.00 .00 1725.00

Tubal-Cain Marine Services, Inc.
Operating Account
P.O. Box 2364
Beaumont, TX 77704

Wachovia Bank
4175 Phelan Blvd
Beaumont, TX 77707

32731

Date February 16, 2011
Amount \$1,725.00

PAY ONLY **1,725.00** CENTS

PAY *****One thousand seven hundred twenty-five dollars and no cents

TO THE ORDER OF
CHEMTEX
PO BOX 3922
PORT ARTHUR, TX 77643

**** COPY ****

Tubal-Cain Marine Services, Inc.
Vendor: CHEMTEX

Check Date: February 16, 2011 **32731**

INVOICE DATE	INVOICE NO	DESCRIPTION	INV. AMOUNT	DISCNT TAKEN	BALANCE
1-18-11	142397	40341	1725.00	.00	1725.00
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Tubal-Cain Marine Services, Inc.
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Beaumont, TX 77704

Wachovia Bank
4175 Phelan Blvd
Beaumont, TX 77707

32731

Date February 16, 2011
Amount \$1,725.00

PAY ONLY **1,725.00** CENTS

PAY *****One thousand seven hundred twenty-five dollars and no cents

TO THE ORDER OF
CHEMTEX
PO BOX 3922
PORT ARTHUR, TX 77643

Deborah Van Hise

032731 111015159 2000019162610



Determining Which Releases are Subject to TRRP

Purpose and Applicability

This document describes a process to help clarify when a release is subject to the Texas Risk Reduction Program (TRRP) rule (30 TAC Chapter 350). This process applies to releases that occur under the jurisdiction of a TCEQ Remediation Division program. The intention of TRRP is to focus on releases that threaten or affect water resources (groundwater, surface water/sediment) and/or those releases that necessitate a decontamination or control remedy. This document sets forth the procedure to help persons make this determination.

If any other rule, permit, or enforcement order applies and is more stringent, then the requirements of the other rule, permit, or enforcement order must be met. Release determinations do not apply to situations where materials or products are used as intended, such as lawful application of chemical pesticides and agricultural chemicals, paved parking lots or roads, or treated utility poles and railroad ties. This document replaces the August 27, 2002 memo entitled *Remediation Division Report Requirements for a Release Investigation*.

Assumptions

Use of this determination process assumes:

- The person has notified the agency of the release in accordance with the Texas Water Code and applicable program rules.
- All source areas are adequately identified.
- Properly collected samples are analyzed for all target chemicals of concern (COCs) using method quantitation limits that are at or below the applicable action levels (unless the action level is lower than the lowest MQL for the most sensitive standard available analytical method).
- Groundwater sampling, when required, is sufficient to characterize COC concentrations in the uppermost saturated zone at all source areas (not intending to include tank hold water).

If any of these assumptions are invalid for a particular release, use of the process in this document is prohibited and the release will be subject to TRRP. This document does not cover current spills handled under 30 TAC Chapter 327.

Definitions

Release

The terms "release" and "discharge" are defined by statute (Texas Health and Safety Code §361.003 and the Texas Water Code §26.001 and §26.121) and in rule (30 TAC 334.7, 335.1, and 350.4).

Report releases within 24 hours of occurrence or discovery to the appropriate part of the agency as listed below:

Table 1. Release Reporting Contacts

Releases from:	Report Release to:	Phone number
Underground and above-ground storage tanks containing regulated petroleum substances and hazardous substances	Responsible Party Remediation Section	512-239-2200 (phone) 512-239-2216 (fax) pstrpr@tceq.state.tx.us (email)
Industrial solid waste and municipal hazardous waste facilities, spills, or other releases	Region Office	See http://www.tnrc.state.tx.us/admin/topdoc/qi/002.pdf for locations and phone numbers

Action Levels

For the purpose of determining which releases are subject to TRRP, action levels are defined as the lowest applicable Tier 1 residential protective concentration level (PCL) for a given COC, assuming a 0.5-acre source area and Class 1 groundwater. Table 2 identifies the applicable human health exposure pathways for determining action levels for surface soils, subsurface soils, and groundwater.

Table 2 – Exposure Pathways for Action Levels						
Media	Exposure Pathways					Background/MQL
	Soil _{Comb} (0-15 ft)	GW _{Soil_{Ing}}	Air _{Soil_{Inh-V}} (>15 ft)	GW _{GW_{Ing}}	Air _{GW_{Inh-V}}	
Surface Soil	X	X				X
Subsurface Soil		X	X			X
Groundwater				X	X	X

If background or the method quantitation limit (MQL) is a higher concentration than the action level, then the higher of background or MQL is the action level. Tier 1 PCL tables may be found at <http://www.tnrc.state.tx.us/permitting/trrp.htm> and background concentrations for metals are shown in Table 3.

Table 3. Texas-Specific Background Concentration

Metal	Median Background Concentration (mg/kg)	Metal	Median Background Concentration (mg/kg)
Aluminum	30,000	Manganese	300
Antimony	1	Mercury	0.04
Arsenic	5.9	Nickel	10
Barium	300	Selenium	0.3
Beryllium	1.5	Strontium	100
Boron	30	Tin	0.9
Total Chromium	30	Titanium	2,000
Cobalt	7	Thallium	0.7
Copper	15	Thorium	9.3
Fluorine	190	Vanadium	50
Iron	15,000	Zinc	30
Lead	15		

Determining Applicability to TRRP

Conduct an investigation when there is evidence that there may have been a release, or when there is another voluntary or mandatory reason for investigation (such as commercial real estate transactions, closure of a solid waste management unit, or permanent removal from service of an underground storage tank). The results of the investigation may result in one of three scenarios:

1. COC concentrations are below background or the MQLs.
2. COC concentrations are above background or MQLs but below action levels, as defined previously in this document.
3. COC concentrations are above action levels.

The associated procedures to be followed for these three situations are discussed in the following sections. Figure 1 illustrates the general process for determining when a release is subject to TRRP. If

any of the answers are still unknown following completion of the investigation, the release is subject to TRRP. Refer to the text for detailed information.

COC Concentrations Less Than MQL or at Background (Scenario 1)

TRRP is not applicable and a report to the agency is not required (unless required by rule) when:

- the COC concentrations are not detected above the higher of the MQL or background,
- there is no other evidence of a release, and
- response actions were not required to achieve MQLs or background.

A report to the agency may be required by a program area to meet other regulations such as for closure of a waste management unit or permanent removal from service of an underground storage tank system. Background can be either site specific (following the requirements that would be applicable under Chapter 350) or from Table 3 above.

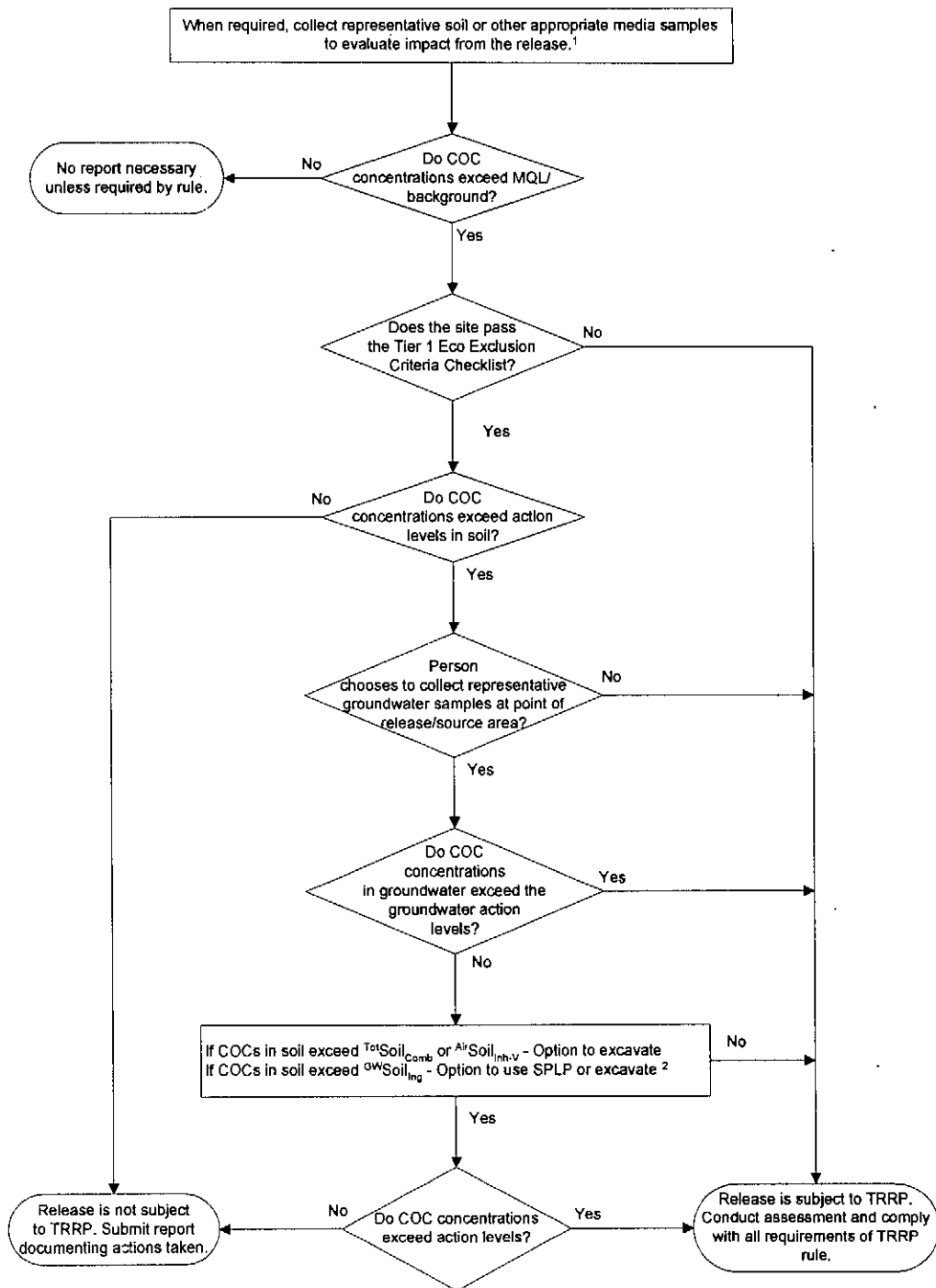
COC Concentrations Greater than MQL/Background (Scenarios 2 and 3)

When COC concentrations exceed MQL or background, both ecological and human health exposure pathways must be considered. Complete the Tier 1 Ecological Exclusion Criteria Checklist to determine if ecological exposure pathways may be of concern. If the site fails the checklist, or if water resources (groundwater, surface water/ sediment) are threatened or affected, the release is subject to TRRP. If the site passes the ecological checklist, evaluate the human health exposure pathways by comparing the analytical results to the action levels defined in Table 2. If the concentrations do not exceed the soil action levels and there is no evidence of other affected or threatened media, the release is not subject to TRRP (Figure 1). Submit a report that documents the investigation and provides justification for no further action. If the agency concurs with the conclusions, a no further action letter will be issued. Otherwise the release is subject to TRRP, unless the person can determine another basis in this document by which TRRP is not applicable.

If the concentrations exceed soil action levels, the release is subject to TRRP unless the person elects to evaluate the groundwater exposure pathway. Collect a representative groundwater sample from each source area to document whether groundwater is affected above action levels. Conduct the sampling in a manner that will prevent COCs from migrating to the groundwater during the drilling or sampling process. Compare the results to the groundwater action level. If COC concentrations exceed the groundwater action levels, the release is subject to TRRP.

Note: Groundwater sampling is always required in conjunction with exercising the excavation or SPLP option to attempt to resolve matters prior to triggering TRRP applicability.

If representative COC concentrations in groundwater do not exceed the action levels, the person can choose a course of action based on which soil action levels are exceeded. For any action level exceeded, excavation and proper disposal of affected soil can be conducted if the affected soil is located on site, entirely in the vadose zone, and can be removed within 60 days from the date the release was reported to the agency. Collect discrete samples to verify the COC concentrations after excavation. If only the ^{GW}Soil_{ing} action level is exceeded, the person may choose to collect samples from the areas of highest concentrations for Synthetic Precipitation Leaching Procedure (SPLP) analysis to determine COC leachability. This process can be done before, after, or in lieu of excavation. When the SPLP analytical results are greater than the ^{GW}GW_{ing} action level, the release is subject to TRRP unless further excavation is completed within the 60-day timeframe, followed by additional analysis. If the final soil and/or SPLP leachate analytical results do not exceed ^{GW}Soil_{ing} or ^{GW}GW_{ing}, respectively, the release will not be subject to TRRP. Submit a report documenting the actions taken and justification for no further action. If the agency concurs with the conclusions, a no further action letter will be issued. Conversely, if the final soil and/or SPLP leachate analytical results do exceed ^{GW}Soil_{ing} or ^{GW}GW_{ing}, respectively, the release will be subject to TRRP.



1. This flowchart cannot be used by itself. Refer to the text for detailed information on this process.
 2. Use of SPLP test is not an option if to address exceedance of $TotSoil_{Comb}$ or $AirSoil_{Inh-V}$ action levels.

Figure 1. Generalized Process to Determine if a Release is Subject to TRRP

ATTACHMENT 7

DREDGE PERMIT

Application No. 12226

Name of Applicant Palmer Barge Line, Inc.

Effective Date 28 DEC 1977

Expiration Date (If applicable) 31 December 1980

DEPARTMENT OF THE ARMY PERMIT

Referring to written request dated 27 June 1977 for a permit to:

(☒) Perform work in or affecting navigable waters of the United States, upon the recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C. 403);

(☒) Discharge dredged or fill material into navigable waters upon the issuance of a permit from the Secretary of the Army acting through the Chief of Engineers pursuant to Section 404 of the Federal Water Pollution Control Act (86 Stat. 816, P.L. 92-500);

() Transport dredged material for the purpose of dumping it into ocean waters upon the issuance of a permit from the Secretary of the Army acting through the Chief of Engineers pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (86 Stat. 1052; P.L. 92-532);

◀ (Here insert the full name and address of the permittee)

**Palmer Barge Line, Inc.
P. O. Drawer 1363
Nederland, Texas 77627**

is hereby authorized by the Secretary of the Army:

to **dredge an area and construct a
bulkhead for a barge docking facility**

◀ (Here describe the proposed structure or activity, and its intended use. In the case of an application for a fill permit, describe the structures, if any, proposed to be erected on the fill. In the case of an application for the discharge of dredged or fill material into navigable waters or the transportation for discharge in ocean waters of dredged material, describe the type and quantity of material to be discharged.)

in **the Neches River**

◀ (Here to be named the ocean, river, harbor, or waterway concerned.)

**at the permittee's facility at Corps of
Engineers Station 0+00 on the Neches
River Channel, approximately 5 miles
northeast from Groves, Texas,**

◀ (Here to be named the nearest well-known locality—preferably a town or city—and the distance in miles and tenths from some definite point in the name, stating whether above or below or giving direction by points of compass.)

in accordance with the plans and drawings attached hereto which are incorporated in and made a part of this permit (on drawings: give file number or other definite identification marks): **in two sheets, sheet 1 of which is entitled**

**"PROPOSED DOCK WITH DREDGING AND DISPOSAL IN NECHES RIVER AND SABINE NECHES
CHANNEL AT P.C. STATION 0+00 NECHES RIVER CHANNEL PORT ARTHUR, TEXAS,
COUNTY OF JEFFERSON STATE OF TEXAS,"**

subject to the following conditions:

1. General Condition:

a. That all activities identified and authorized herein shall be consistent with the terms and conditions of this permit; and that any activities not specifically identified and authorized herein shall constitute a violation of the terms and conditions of this permit which may result in the modification, suspension or revocation of this permit, in whole or in part, as set forth more specifically in General Conditions j or k hereto, and in the institution of such legal proceedings as the United States Government may consider appropriate, whether or not this permit has been previously modified, suspended or revoked in whole or in part.

b. That all activities authorized herein shall, if they involve a discharge or deposit into navigable waters or ocean waters, be at all times consistent with applicable water quality standards, effluent limitations and standards of performance, prohibitions, and pretreatment standards established pursuant to Sections 301, 302, 306 and 307 of the Federal Water Pollution Control Act of 1972 (P.L. 92-500; 86 Stat. 816), or pursuant to applicable State and local law.

c. That when the activity authorized herein involves a discharge or deposit of dredged or fill material into navigable waters, the authorized activity shall, if applicable water quality standards are revised or modified during the term of this permit, be modified, if necessary, to conform with such revised or modified water quality standards within 6 months of the effective date of any revision or modification of water quality standards, or as directed by an implementation plan contained in such revised or modified standards, or within such longer period of time as the District Engineer, in consultation with the Regional Administrator of the Environmental Protection Agency, may determine to be reasonable under the circumstances.

d. That the permittee agrees to make every reasonable effort to prosecute the work authorized herein in a manner so as to minimize any adverse impact of the work on fish, wildlife and natural environmental values.

e. That the permittee agrees to prosecute the work authorized herein in a manner so as to minimize any degradation of water quality.

f. That the permittee shall permit the District Engineer or his authorized representative(s) or designee(s) to make periodic inspections at any time deemed necessary in order to assure that the activity being performed under authority of this permit is in accordance with the terms and conditions prescribed herein.

g. That the permittee shall maintain the structure or work authorized herein in good condition and in accordance with the plans and drawings attached hereto.

h. That this permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and that it does not authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations, nor does it obviate the requirement to obtain State or local consent required by law for the activity authorized herein.

i. That this permit does not authorize the interference with any existing or proposed Federal project and that the permittee shall not be entitled to compensation for damage or injury to the structures or work authorized herein which may be caused by or result from existing or future operations undertaken by the United States in the public interest.

j. That this permit may be summarily suspended, in whole or in part, upon a finding by the District Engineer that immediate suspension of the activity authorized herein would be in the general public interest. Such suspension shall be effective upon receipt by the permittee of a written notice thereof which shall indicate (1) the extent of the suspension, (2) the reasons for this action, and (3) any corrective or preventative measures to be taken by the permittee which are deemed necessary by the District Engineer to abate imminent hazards to the general public interest. The permittee shall take immediate action to comply with the provisions of this notice. Within ten days following receipt of this notice of suspension, the permittee may request a hearing in order to present information relevant to a decision as to whether his permit should be reinstated, modified or revoked. If a hearing is requested, it shall be conducted pursuant to procedures prescribed by the Chief of Engineers. After completion of the hearing, or within a reasonable time after issuance of the suspension notice to the permittee if no hearing is requested, the permit will either be reinstated, modified or revoked.

k. That this permit may be either modified, suspended or revoked in whole or in part if the Secretary of the Army or his authorized representative determines that there has been a violation of any of the terms or conditions of this permit or that such action would otherwise be in the public interest. Any such modification, suspension, or revocation shall become effective 30 days after receipt by the permittee of written notice of such action which shall specify the facts or conduct warranting same unless (1) within the 30-day period the permittee is able to satisfactorily demonstrate that (a) the alleged violation of the terms and the conditions of this permit did not, in fact, occur or (b) the alleged violation was accidental, and the permittee has been operating in compliance with the terms and conditions of the permit and is able to provide satisfactory assurances that future operations shall be in full compliance with the terms and conditions of this permit; or (2) within the aforesaid 30-day period, the permittee requests that a public hearing be held to present oral and written evidence concerning the proposed modification, suspension or revocation. The conduct of this hearing and the procedures for making a final decision either to modify, suspend or revoke this permit in whole or in part shall be pursuant to procedures prescribed by the Chief of Engineers.

l. That in issuing this permit, the Government has relied on the information and data which the permittee has provided in connection with his permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Government may, in addition, institute appropriate legal proceedings.

m. That any modification, suspension, or revocation of this permit shall not be the basis for any claim for damages against the United States.

n. That the permittee shall notify the District Engineer at what time the activity authorized herein will be commenced, as far in advance of the time of commencement as the District Engineer may specify, and of any suspension of work, if for a period of more than one week, resumption of work and its completion.

o. That if the activity authorized herein is not started on or before the first day of July, 1980 (one year from the date of issuance of this permit unless otherwise specified) and is not completed on or before thirty-first day of December, 1980 (three years from the date of issuance of this permit unless otherwise specified) this permit, if not previously revoked or specifically extended, shall automatically expire.

p. That no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized by this permit.

q. That if the display of lights and signals on any structure or work authorized herein is not otherwise provided for by law, such lights and signals as may be prescribed by the United States Coast Guard shall be installed and maintained by and at the expense of the permittee.

r. That this permit does not authorize or approve the construction of particular structures, the authorization or approval of which may require authorization by the Congress or other agencies of the Federal Government.

s. That if and when the permittee desires to abandon the activity authorized herein, unless such abandonment is part of a transfer procedure by which the permittee is transferring his interests herein to a third party pursuant to General Condition v hereof, he must restore the area to a condition satisfactory to the District Engineer.

t. That if the recording of this permit is possible under applicable State or local law, the permittee shall take such action as may be necessary to record this permit with the Register of Deeds or other appropriate official charged with the responsibility for maintaining records of title to and interests in real property.

u. That there shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein.

v. That this permit may not be transferred to a third party without prior written notice to the District Engineer, either by the transferee's written agreement to comply with all terms and condition of this permit or by the transferee subscribing to this permit in the space provided below and thereby agreeing to comply with all terms and conditions of this permit. In addition, if the permittee transfers the interests authorized herein by conveyance of realty, the deed shall reference this permit and the terms and conditions specified herein and this permit shall be recorded along with the deed with the Register of Deeds or other appropriate official.

The following Special Conditions will be applicable when appropriate:

STRUCTURES FOR SMALL BOATS: That permittee hereby recognizes the possibility that the structure permitted herein may be subject to damage by wave wash from passing vessels. The issuance of this permit does not relieve the permittee from taking all proper steps to insure the integrity of the structure permitted herein and the safety of boats moored thereto from damage by wave wash and the permittee shall not hold the United States liable for any such damage.

DISCHARGE OF DREDGED MATERIAL INTO OCEAN WATERS: That the permittee shall place a copy of this permit in a conspicuous place in the vessel to be used for the transportation and/or dumping of the dredged material as authorized herein.

ERECTION OF STRUCTURE IN OR OVER NAVIGABLE WATERS: That the permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the authorized structure or work, shall, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the waterway to its former conditions. If the permittee fails to comply with the direction of the Secretary of the Army or his authorized representative, the Secretary or his designee may restore the waterway to its former condition, by contract or otherwise, and recover the cost thereof from the permittee.

MAINTENANCE DREDGING: (1) That when the work authorized herein includes periodic maintenance dredging, it may be performed under this permit for 3 years from the date of issuance of this permit (ten years unless otherwise indicated); and (2) That the permittee will advise the District Engineer in writing at least two weeks before he intends to undertake any maintenance dredging.

II. Special Conditions (Here list conditions relating specifically to the proposed structure or work authorized by this permit):

This permit shall become effective on the date of the District Engineer's signature.

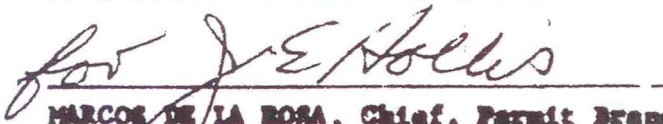
Permittee hereby accepts and agrees to comply with the terms and conditions of this permit.


PERMITTEE

December 19, 1977
DATE

PALMER BARGE LINE, INC.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:


MARCOS DE LA ROSA, Chief, Permit Branch

FOR COLONEL JON C. VANDEN BOSCH
DISTRICT ENGINEER,
U.S. ARMY, CORPS OF ENGINEERS

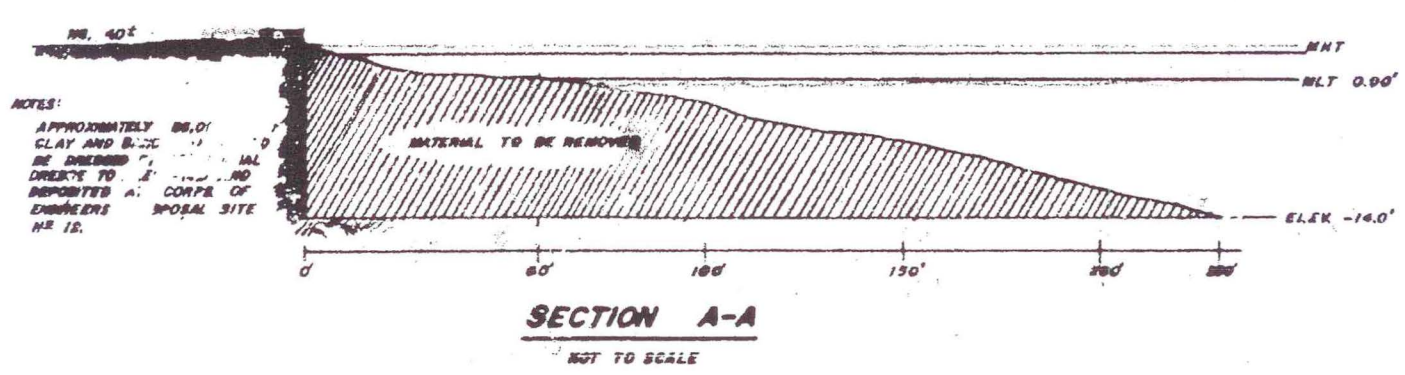
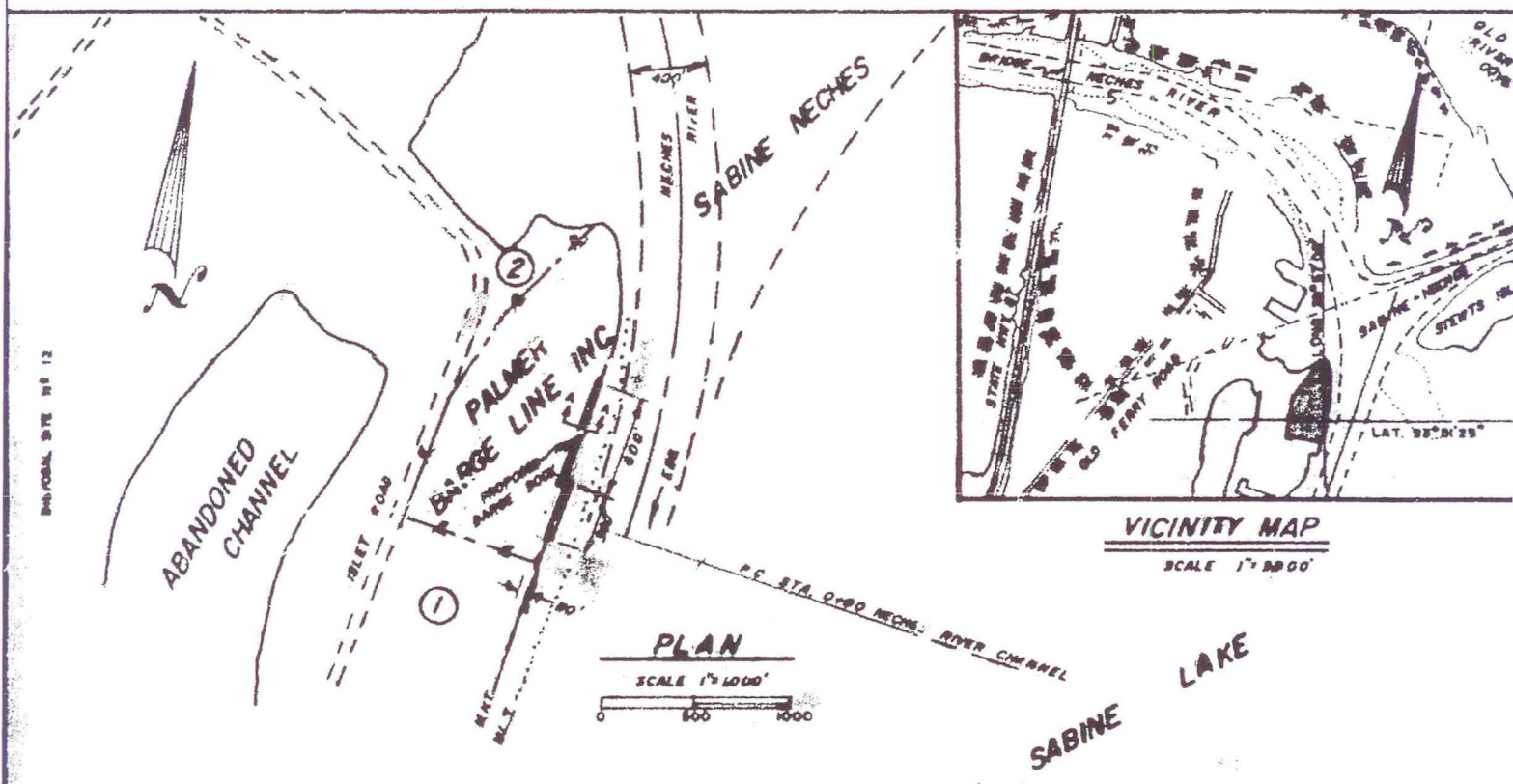
28 DEC 1977
DATE

Transferee hereby agrees to comply with the terms and conditions of this permit.

TRANSFEEE

DATE

12226



NOTES:
APPROXIMATELY 85,000
CUBIC YARDS OF
CLAY AND SILT
WILL BE DREDGED
AND DISPOSED AT
PORT ARTHUR, TEXAS
BY THE U.S. ARMY
ENGINEERS. DISPOSAL SITE
NO. 15.

PURPOSE: BARGE DOCKING FACILITY

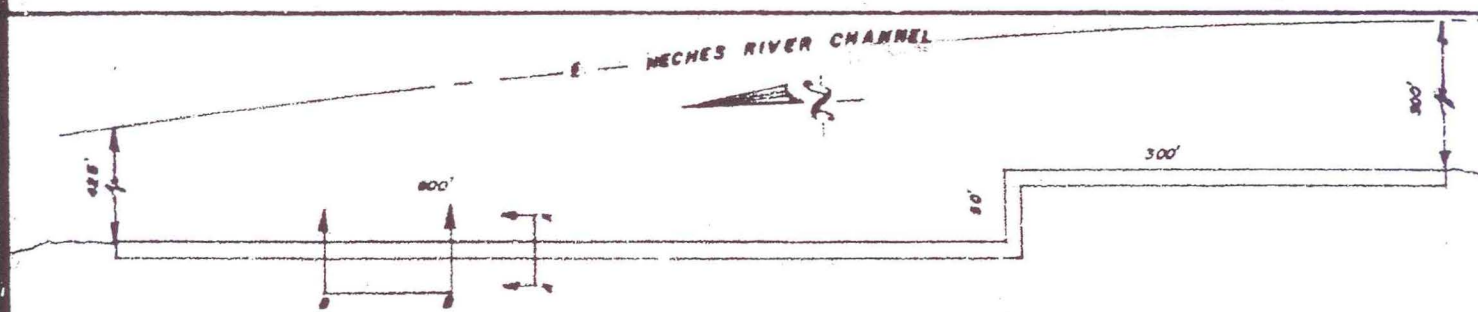
DATUM: MEAN LOW TIDE
ADJACENT PROPERTY OWNERS

- ① STATE MARINE SERVICE
- ② CITY OF PORT ARTHUR

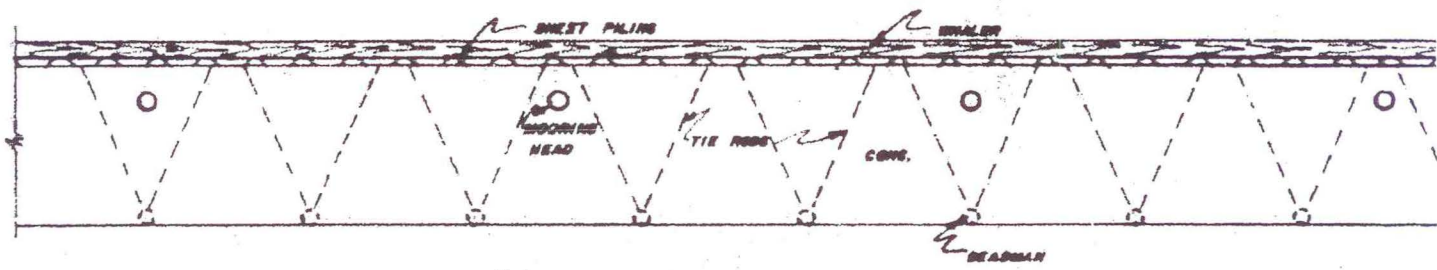
PROPOSED DOCK WITH DREDGING AND
DISPOSAL

IN NECHES RIVER AND SABINE NECHES
CHANNEL
AT P.C. STATION 0+00 NECHES RIVER
CHANNEL PORT ARTHUR, TEXAS
COUNTY OF JEFFERSON STATE OF TEXAS
APPLICATION BY: PALMER BARGE LINE

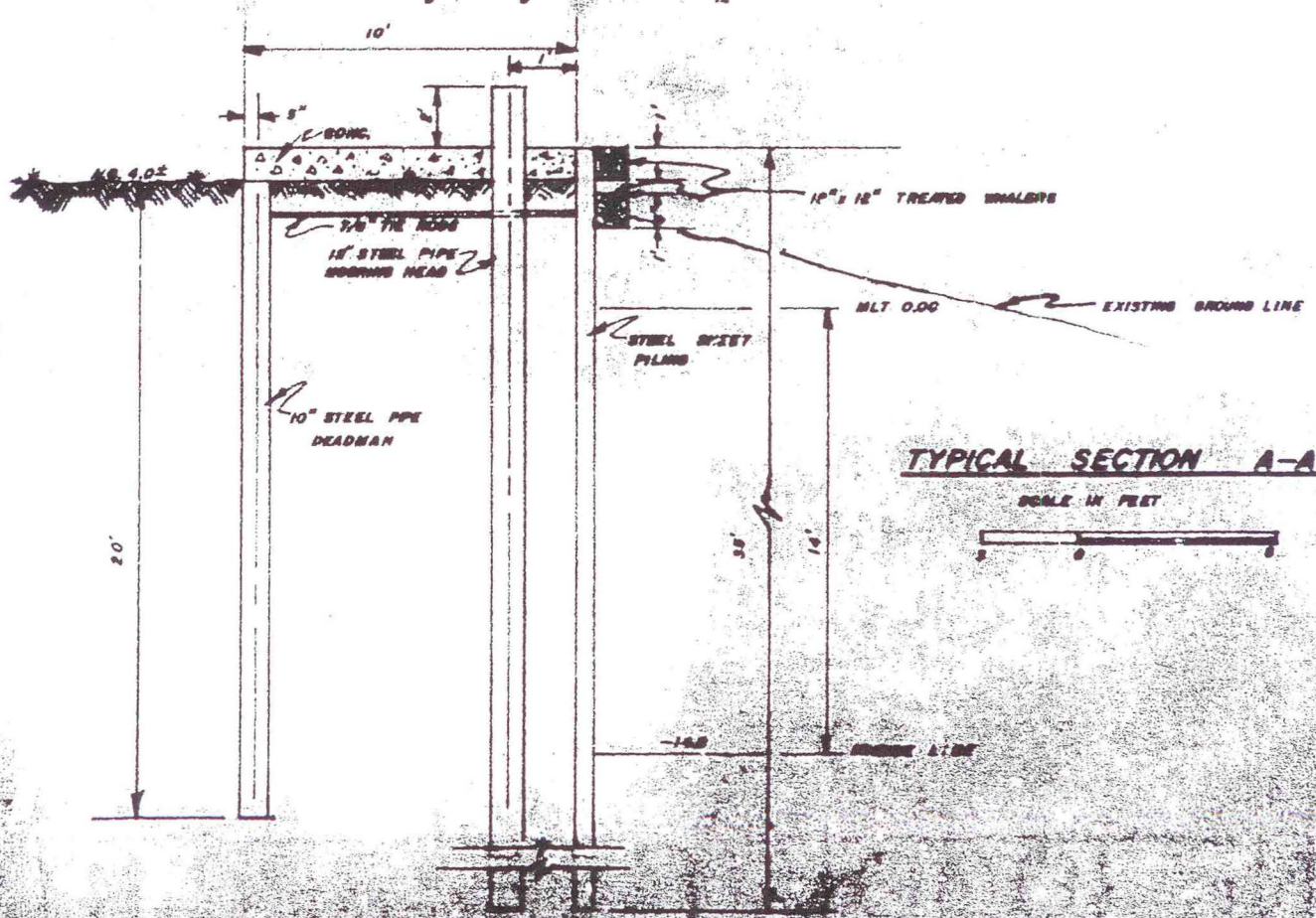
12226



PLAN



PLAN SECTION B-B



TYPICAL SECTION A-A





DEPARTMENT OF THE ARMY
GALVESTON DISTRICT, CORPS OF ENGINEERS
P.O. BOX 1229
GALVESTON, TEXAS 77553

REPLY TO
ATTENTION OF:

SWGCO-RP

SUBJECT: PERMIT-12226 (01)

2 5 AUG 1981

Palmer Barge Line
P.O. Drawer 1363
Nederland, Texas 77627

Gentlemen:

In accordance with your written request dated 13 May 1981 the authorization granted by the Secretary of the Army, in letter dated 28 December 1977, from the Commander at Galveston, Texas, to "dredge an area and construct a bulkhead for a barge docking facility in the Neches River at the permittee's facility at Corps of Engineers Station 0+00 on the Neches River Channel, approximately 5 miles northeast from Groves, Texas," is hereby specifically extended to 31 December 1984.

The conditions to which the authorization is made subject remain in full force and effect with the exception of the time limit for completion and the addition of the special conditions which read as follows:

a. That if the permittee, during prosecution of the work authorized herein, encounters a previously unidentified archeological or other cultural resource that might be eligible for listing in the National Register of Historic Places, he shall immediately notify the Commander.

b. That during prosecution of the work authorized herein, periodic inspections will be made by the Permit Branch archeologist to assure that the activity being performed is not infringing on archeological sites.

Copies furnished:
See Page 2

SMGCO-RP

SUBJECT: PERMIT-12226 (01)

Palmer Barge Line

If the structure and work authorized is not completed on or before the date herein specified, the authorization, if not previously revoked or specifically further extended, will cease and become null and void.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

FOR COLONEL JAMES M. SIGLER, COMMANDING


MARCOS DE LA ROSA
Chief, Permit Branch

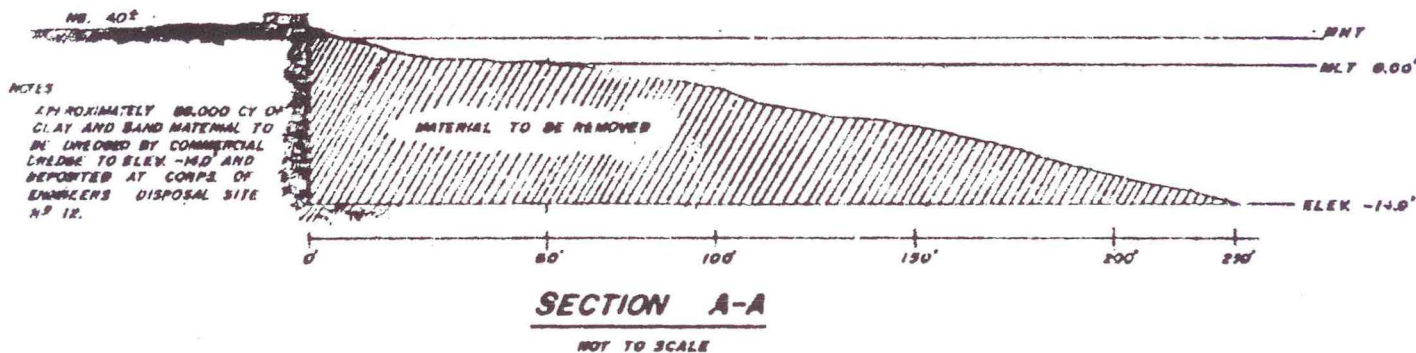
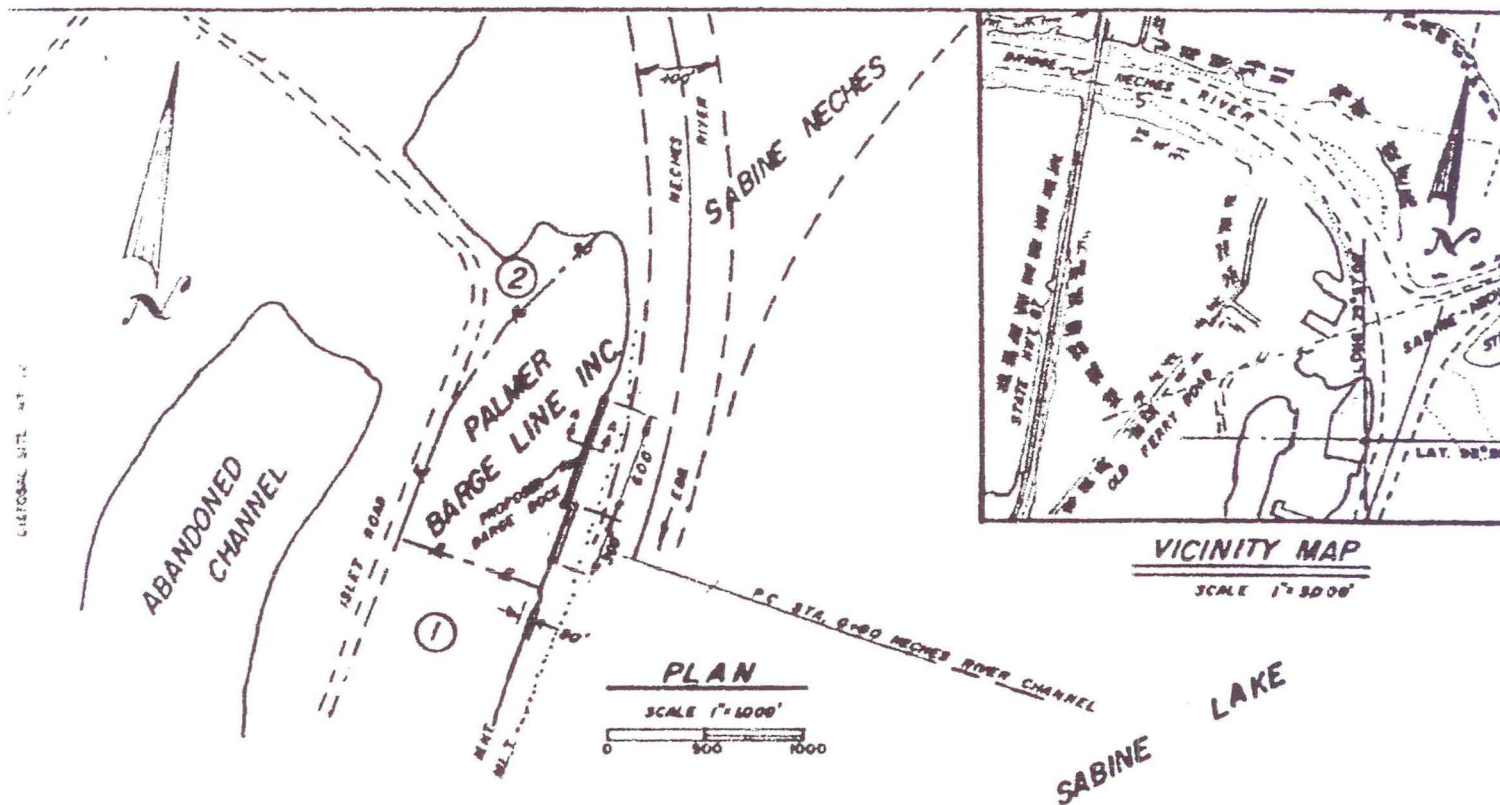
Copies furnished:

Commander, Eighth Coast Guard District, Hale Boggs Federal Building, Room 1330, 500 Camp Street, New Orleans, Louisiana 70130

Director, Atlantic Marine Center, National Ocean Survey, ATTN: CAM04, 439 West York Street, Norfolk, Virginia 23510

Area Engineer, Port Arthur Area Office, P.O. Box 157, Port Arthur, Texas 77640

#1222610



PURPOSE: BARGE DOCKING FACILITY

PROPOSED DOCK WITH DREDGING AND DISPOSAL

DATUM: MEAN LOW TIDE
ADJACENT PROPERTY OWNERS

- ① STATE MARINE SERVICE
- ② CITY OF PORT ARTHUR

IN NECHES RIVER AND SABINE NECHES CHANNEL

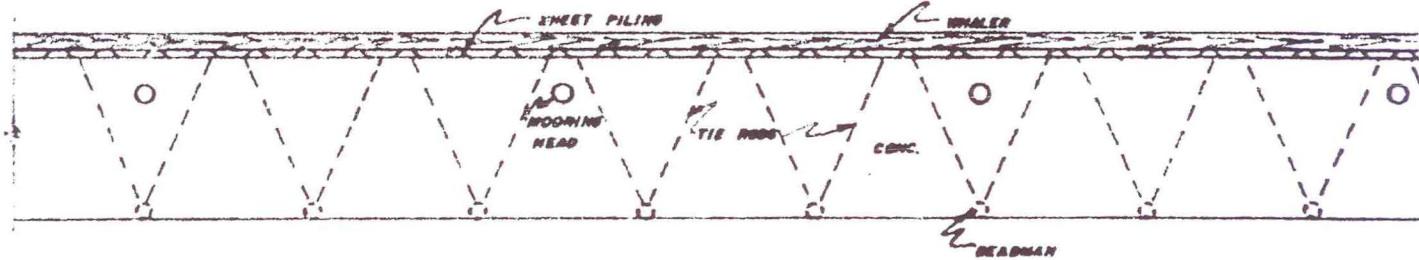
AT P.C. STATION 0+00 NECHES RIVER CHANNEL PORT ARTHUR, TEXAS
COUNTY OF JEFFERSON STATE OF TEXAS

APPLICATION BY: PALMER BARGE LINE

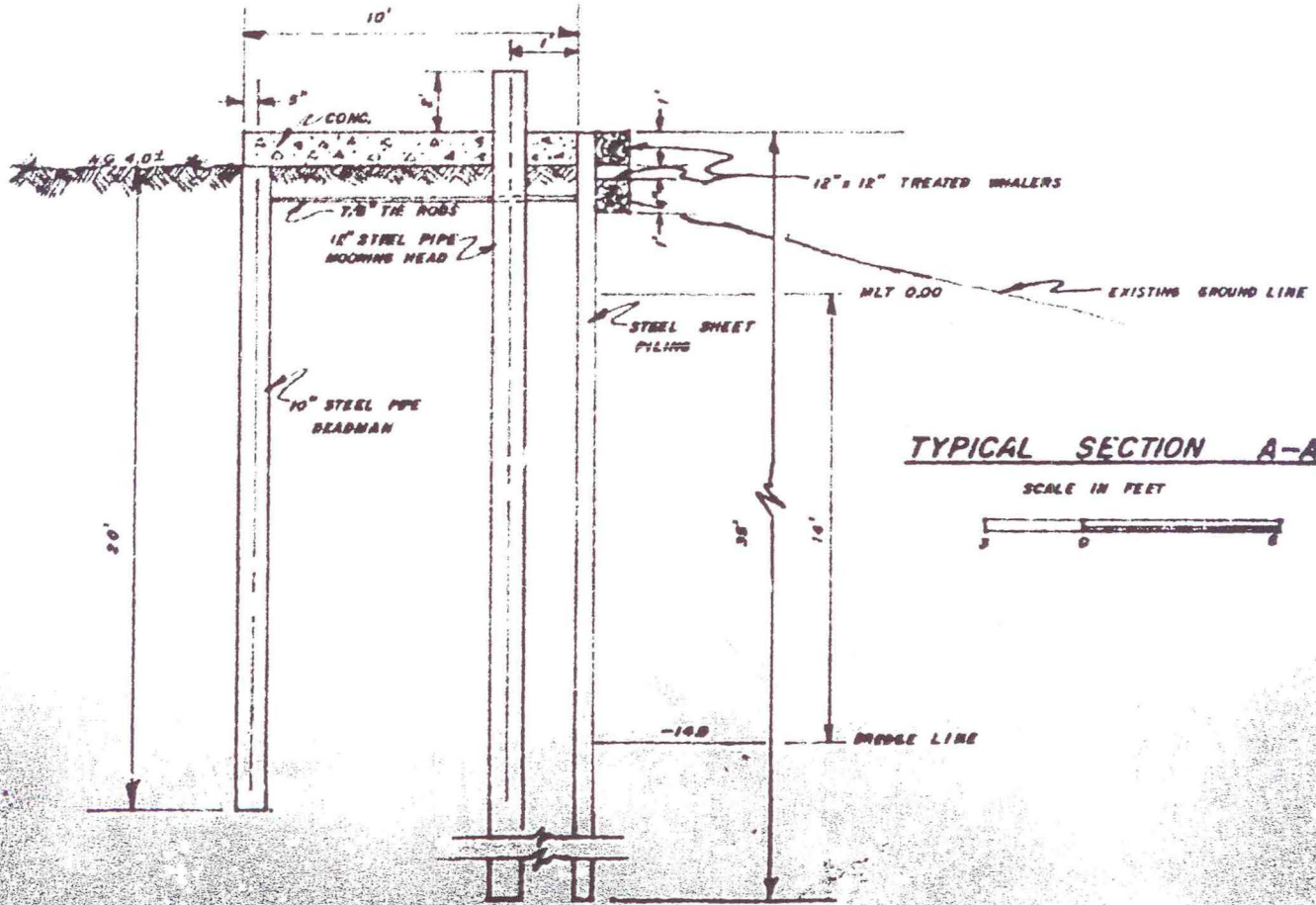
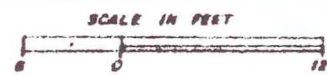
#122



PLAN



PLAN SECTION B-B



TYPICAL SECTION A-A



ATTACHMENT 8
SITE VISIT CHECKLIST

FIVE-YEAR REVIEW SITE VISIT CHECKLIST

I. SITE INFORMATION											
Site Name: State Marine Superfund Site		Date of Inspection: 10 November 2011									
Location and Region: Pleasure Islet, Port Arthur, Reg. 6		EPA ID: TXD099801102									
Agency, office, or company leading the five-year review: U.S. Environmental Protection Agency, Region 6		Weather/temperature: Clear with NNE winds at 10 mph and gusts up to 23 mph/temperature of 59°F.									
Remedy Includes: (Check all that apply) <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Ground water pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other (Monitored natural attenuation) </td> </tr> </table>				<input type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls	<input type="checkbox"/> Ground water pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other (Monitored natural attenuation)						
<input type="checkbox"/> Landfill cover/containment <input type="checkbox"/> Access controls <input checked="" type="checkbox"/> Institutional controls	<input type="checkbox"/> Ground water pump and treatment <input type="checkbox"/> Surface water collection and treatment <input type="checkbox"/> Other (Monitored natural attenuation)										
Attachments: <input checked="" type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached (Figure 2 of report)											
II. INTERVIEWS (Check all that apply)											
1. O&M Site Manager <u>Wes Penn</u> <u>New Birmingham Site Manager</u> <div style="display: flex; justify-content: space-between; margin-left: 100px;"> Name Title Date </div> Interviewed: <input type="checkbox"/> by e-mail <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. <u>903-780-9594</u> Problems, suggestions: <input type="checkbox"/> Report attached <u>See Site Survey Form</u>											
2. O&M Staff <u>N/A</u> <div style="display: flex; justify-content: space-between; margin-left: 100px;"> Name Title Date </div> Interviewed: <input type="checkbox"/> by mail <input type="checkbox"/> at office <input type="checkbox"/> by phone Phone no. _____ Problems, suggestions: <input type="checkbox"/> Report attached											
3. Local regulatory authorities and response agencies (i.e.; State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.). Fill in all that apply.											
Agency <u>Texas Commission on Environmental Quality</u> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Contact <u>Olga Salinas</u></td> <td style="width: 30%;">Project Manager</td> <td style="width: 20%;">11/10/2011</td> <td style="width: 20%;">(713-767-3721)</td> </tr> <tr> <td style="text-align: center;">Name</td> <td style="text-align: center;">Title</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Phone no.</td> </tr> </table> Problems, suggestions: <input type="checkbox"/> Report attached <u>See Site Survey Form</u>				Contact <u>Olga Salinas</u>	Project Manager	11/10/2011	(713-767-3721)	Name	Title	Date	Phone no.
Contact <u>Olga Salinas</u>	Project Manager	11/10/2011	(713-767-3721)								
Name	Title	Date	Phone no.								
Agency _____ <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Contact _____</td> <td style="width: 30%;">_____</td> <td style="width: 20%;">_____</td> <td style="width: 20%;">(_____) _____</td> </tr> <tr> <td style="text-align: center;">Name</td> <td style="text-align: center;">Title</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Phone no.</td> </tr> </table> Problems, suggestions: <input type="checkbox"/> Report attached _____				Contact _____	_____	_____	(_____) _____	Name	Title	Date	Phone no.
Contact _____	_____	_____	(_____) _____								
Name	Title	Date	Phone no.								

4. Other interviews (optional): <input type="checkbox"/> Report attached to Five-Year Review Report			
III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)			
1. O&M Documents			
<input type="checkbox"/> O&M manual (long term monitoring plan)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> As-built drawings	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Maintenance logs	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
2. Site-Specific Health and Safety Plan			
<input type="checkbox"/> Contingency plan/emergency response plan	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
3. O&M and OSHA Training Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			
4. Permits and Service Agreements			
<input type="checkbox"/> Air discharge permit	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Effluent discharge	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Waste disposal, POTW	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Other permits _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
5. Gas Generation Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
6. Settlement Monument Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
7. Ground Water Monitoring Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
8. Leachate Extraction Records			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
9. Discharge Compliance Records			
<input type="checkbox"/> Air	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
<input type="checkbox"/> Water (effluent)	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A
Remarks: _____			
10. Daily Access/Security Logs			
<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input checked="" type="checkbox"/> N/A	
Remarks: _____			

IV. O&M COSTS

1. O&M Organization

- ☐ State in-house ☐ Contractor for State ☐ PRP in-house
☐ Contractor for PRP ☒ Other No O&M ongoing

2. O&M Cost Records N/A

- ☐ Readily available ☐ Up to date ☐ Funding mechanism/agreement in place
☐ Original O&M cost estimate ☐ Breakdown attached

Total annual cost by year for review period, if available

<u>Date</u>	<u>Date</u>	<u>Total Cost</u>	
From _____ to _____		_____	- <input type="checkbox"/> Breakdown attached
From _____ to _____		_____	- <input type="checkbox"/> Breakdown attached
From _____ to _____		_____	- <input type="checkbox"/> Breakdown attached
From _____ to _____		_____	- <input type="checkbox"/> Breakdown attached
From _____ to _____		_____	- <input type="checkbox"/> Breakdown attached
From _____ to _____		_____	- <input type="checkbox"/> Breakdown attached
From _____ to _____		_____	- <input type="checkbox"/> Breakdown attached
From _____ to _____		_____	- <input type="checkbox"/> Breakdown attached

3. Unanticipated or Unusually High O&M Costs During Review Period

N/A

V. ACCESS AND INSTITUTIONAL CONTROLS

☒ Applicable ☐ N/A

A. Fencing

1. Fencing damaged ☒ Location shown on site map ☒ Gates secured ☐ N/A

Remarks: Only a partial fence on north side and no fence on the west side of the site.

B. Other Access Restrictions

1. Signs and other security measures ☐ Location shown on site map ☒ N/A

Remarks: No signs on gate or along fencing regarding the Superfund status of the site. The signs on the fence include information about the current tenant.

C. Institutional Controls**1. Implementation and enforcement**

Site conditions imply ICs not properly implemented

☐ Yes☒ No☐ N/A

Site conditions imply ICs not being fully enforced

☐ Yes☒ No☐ N/A

Type of monitoring (e.g., self-reporting, drive by) _____ None

Frequency _____ N/A

Responsible party/agency _____

Contact _____

Name

Title

Date

Phone no.

Reporting is up-to-date

☐ Yes☐ No☒ N/A

Reports are verified by the lead agency

☐ Yes☐ No☒ N/A

Specific requirements in deed or decision documents have been met

☒ Yes☐ No☐ N/A

Violations have been reported

☐

Yes

☐ No☒ N/AOther problems or suggestions: ☐ Report attached**2. Adequacy**☐ ICs are adequate☐ ICs are inadequate☐ N/A

Remarks: _____

D. General**1. Vandalism/trespassing**☐ Location shown on site map☒ No vandalism evident

Remarks: _____

2. Land use changes onsite☐ N/ARemarks: Land use remains industrial, however there is a new tenant onsite.**3. Land use changes offsite**☐ N/A

Remarks: _____

VI. GENERAL SITE CONDITIONS**A. Roads**☒ Applicable☐ N/A**1. Roads damaged**☐ Location shown on site map☒ Roads adequate☐ N/A

Remarks: _____

B. Other Site Conditions

Remarks: _____

VII. LANDFILL COVERS		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
A. Landfill Surface			
1. Settlement (Low spots)	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Settlement not evident	
Areal extent _____	Depth _____		
Remarks: _____			
2. Cracks	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Cracking not evident	
Lengths _____	Widths _____	Depths _____	
Remarks: _____			
3. Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Erosion not evident	
Areal extent _____	Depth _____		
Remarks: _____			
4. Holes	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Holes not evident	
Areal extent _____	Depth _____		
Remarks: _____			
5. Vegetative Cover	<input type="checkbox"/> Grass	<input type="checkbox"/> Cover properly established	<input type="checkbox"/> No signs of stress
<input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram)			
Remarks: _____			
6. Alternative Cover (armored rock, concrete, etc.)	<input type="checkbox"/> N/A		
Remarks: _____			
7. Bulges	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Bulges not evident	
Areal extent _____	Depth _____		
Remarks: _____			
8. Wet Areas/Water Damage	<input type="checkbox"/> Wet areas/water damage not evident		
<input type="checkbox"/> Wet areas	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Areal extent _____	
<input type="checkbox"/> Ponding	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Areal extent _____	
<input type="checkbox"/> Seeps	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Areal extent _____	
<input type="checkbox"/> Soft subgrade	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Areal extent _____	
Remarks: _____			
9. Slope Instability	<input type="checkbox"/> Slides	<input type="checkbox"/> Location shown on site map	
<input type="checkbox"/> No evidence of slope instability	Areal extent _____		
Remarks: _____			

B. Benches <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A <small>(Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)</small>	
1. Flows Bypass Bench	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay Remarks: _____ _____
2. Bench Breached	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay Remarks: _____ _____
3. Bench Overtopped	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay Remarks: _____ _____
C. Letdown Channels <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A <small>(Channel lined with erosion control mats, rip rap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)</small>	
1. Settlement	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of settlement Areal extent _____ Depth _____ Remarks: _____ _____
2. Material Degradation	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of degradation Material type _____ Areal extent _____ Remarks: _____ _____
3. Erosion	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of erosion Areal extent _____ Depth _____ Remarks: _____ _____
4. Undercutting	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of undercutting Areal extent _____ Depth _____ Remarks: _____ _____
5. Obstructions Type _____ <input type="checkbox"/> No obstructions <input type="checkbox"/> Location shown on site map Areal extent _____ Size _____ Remarks: _____ _____	
6. Excessive Vegetative Growth Type _____ <input type="checkbox"/> No evidence of excessive growth <input type="checkbox"/> Vegetation in channels does not obstruct flow <input type="checkbox"/> Location shown on site map Areal extent _____ Remarks: _____ _____	

D. Cover Penetrations				<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1. Gas Vents <input type="checkbox"/> Active <input type="checkbox"/> Passive					
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition		
<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs O&M	<input type="checkbox"/> N/A			
Remarks: _____					
<hr/>					
2. Gas Monitoring Probes <input type="checkbox"/> Active <input type="checkbox"/> Passive					
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition		
<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs O&M	<input type="checkbox"/> N/A			
Remarks: _____					
<hr/>					
3. Monitoring Wells (within surface area of landfill)					
<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs O&M	<input type="checkbox"/> N/A			
Remarks: _____					
<hr/>					
4. Leachate Extraction Wells					
<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled	<input type="checkbox"/> Good condition		
<input type="checkbox"/> Evidence of leakage at penetration	<input type="checkbox"/> Needs O&M	<input type="checkbox"/> N/A			
Remarks: _____					
<hr/>					
5. Settlement Monuments <input type="checkbox"/> Located <input type="checkbox"/> Routinely surveyed <input type="checkbox"/> N/A					
Remarks: _____					
<hr/>					
E. Gas Collection and Treatment				<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1. Gas Treatment Facilities					
<input type="checkbox"/> Flaring	<input type="checkbox"/> Thermal destruction	<input type="checkbox"/> Collection for reuse			
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs O&M				
Remarks: _____					
<hr/>					
2. Gas Collection Wells, Manifolds, and Piping <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M					
Remarks: _____					
<hr/>					
3. Gas Monitoring Facilities (e.g., gas monitoring of adjacent homes or buildings)					
<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs O&M	<input type="checkbox"/> N/A			
Remarks: _____					
<hr/>					
F. Cover Drainage Layer				<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1. Outlet Pipes Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A					
Remarks: _____					
<hr/>					
2. Outlet Rock Inspected <input type="checkbox"/> Functioning <input type="checkbox"/> N/A					
Remarks: _____					
<hr/>					

G. Detention/Sedimentation Ponds <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1. Siltation	Areal extent _____	Size _____
<input type="checkbox"/> N/A	<input type="checkbox"/> Siltation not evident	
Remarks: _____		
2. Erosion	Areal extent _____	Depth _____
<input type="checkbox"/> Erosion not evident		
Remarks: _____		
3. Outlet Works	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____		
4. Dam	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____		
H. Retaining Walls <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1. Deformations	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident
Horizontal displacement _____		Vertical displacement _____
Rotational displacement _____		
Remarks: _____		
2. Degradation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
Remarks: _____		
I. Perimeter Ditches/Off-Site Discharge <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1. Siltation	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
Areal extent _____		Depth _____
Remarks: _____		
2. Vegetative Growth	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
<input type="checkbox"/> Vegetation does not impede flow		
Areal extent _____		Type _____
Remarks: _____		
3. Erosion	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Erosion not evident
Areal extent _____		Depth _____
Remarks: _____		
4. Discharge Structure	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks: _____		

VIII. VERTICAL BARRIER WALLS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1. Settlement	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Settlement not evident	
Areal extent _____ Depth _____			
Remarks: _____			
2. Performance Monitoring	Type of monitoring _____		
<input type="checkbox"/> Performance not monitored			
Frequency _____		<input type="checkbox"/> Evidence of breaching	
Head differential _____			
Remarks: _____			
IX. GROUND WATER/SURFACE WATER REMEDIES <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
A. Ground Water Extraction Wells, Pumps, and Pipelines <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1. Pumps, Wellhead Plumbing, and Electrical			
<input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A			
Remarks: _____			
2. Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances			
<input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M			
Remarks: _____			
3. Spare Parts and Equipment			
<input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided			
Remarks: _____			
B. Surface Water Collection Structures, Pumps, and Pipelines <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1. Collection Structures, Pumps, and Electrical			
<input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M			
Remarks: _____			
2. Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances			
<input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M			
Remarks: _____			
3. Spare Parts and Equipment			
<input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided			
Remarks: _____			

C. Treatment System	<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1. Treatment Train (Check components that apply) <div style="display: flex; flex-wrap: wrap; padding: 5px;"> <div style="width: 33%;"><input type="checkbox"/> Metals removal</div> <div style="width: 33%;"><input type="checkbox"/> Oil/water separation</div> <div style="width: 33%;"><input type="checkbox"/> Bioremediation</div> <div style="width: 33%;"><input type="checkbox"/> Air stripping</div> <div style="width: 33%;"><input type="checkbox"/> Carbon absorbers</div> <div style="width: 33%;"><input type="checkbox"/> Filters _____</div> <div style="width: 33%;"><input type="checkbox"/> Additive (e.g., chelation agent, flocculent) _____</div> <div style="width: 33%;"><input type="checkbox"/> Others _____</div> <div style="width: 33%;"><input type="checkbox"/> Good condition</div> <div style="width: 33%;"><input type="checkbox"/> Needs O&M</div> <div style="width: 33%;"><input type="checkbox"/> Sampling ports properly marked and functional</div> <div style="width: 33%;"><input type="checkbox"/> Sampling/maintenance log displayed and up to date</div> <div style="width: 33%;"><input type="checkbox"/> Equipment properly identified</div> <div style="width: 33%;"><input type="checkbox"/> Quantity of ground water treated annually _____</div> <div style="width: 33%;"><input type="checkbox"/> Quantity of surface water treated annually _____</div> </div> <div style="border-top: 1px solid black; margin-top: 5px;"> Remarks: _____ _____ _____ </div>		
2. Electrical Enclosures and Panels (Properly rated and functional) <div style="display: flex; justify-content: space-between; padding: 5px;"> <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M </div> <div style="border-top: 1px solid black; margin-top: 5px;"> Remarks: _____ _____ </div>		
3. Tanks, Vaults, Storage Vessels <div style="display: flex; justify-content: space-between; padding: 5px;"> <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs O&M </div> <div style="border-top: 1px solid black; margin-top: 5px;"> Remarks: _____ _____ </div>		
4. Discharge Structure and Appurtenances <div style="display: flex; justify-content: space-between; padding: 5px;"> <input type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs O&M </div> <div style="border-top: 1px solid black; margin-top: 5px;"> Remarks: _____ _____ </div>		
5. Treatment Building(s) <div style="display: flex; justify-content: space-between; padding: 5px;"> <input type="checkbox"/> N/A <input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair </div> <div style="border-top: 1px solid black; margin-top: 5px;"> <input type="checkbox"/> Chemicals and equipment properly stored Remarks: _____ _____ </div>		
6. Monitoring Wells (Pump and treatment remedy) <div style="display: flex; flex-wrap: wrap; padding: 5px;"> <div style="width: 33%;"><input type="checkbox"/> Properly secured/locked</div> <div style="width: 33%;"><input type="checkbox"/> Functioning</div> <div style="width: 33%;"><input type="checkbox"/> Routinely sampled</div> <div style="width: 33%;"><input type="checkbox"/> Good condition</div> <div style="width: 33%;"><input type="checkbox"/> All required wells located</div> <div style="width: 33%;"><input type="checkbox"/> Needs O&M</div> <div style="width: 33%;"><input type="checkbox"/> N/A</div> </div> <div style="border-top: 1px solid black; margin-top: 5px;"> Remarks: _____ _____ _____ </div>		
D. Monitored Natural Attenuation <div style="display: flex; justify-content: space-between; padding: 5px;"> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A </div>		
1. Monitoring Wells (Natural attenuation remedy) <div style="display: flex; justify-content: space-between; padding: 5px;"> <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled (quarterly) <input type="checkbox"/> Good condition </div> <div style="border-top: 1px solid black; margin-top: 5px;"> <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs O&M <input type="checkbox"/> N/A Remarks: _____ _____ </div>		

X. OTHER REMEDIES

If there are remedies applied at the site that are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).

Sediment offshore of State Marine Superfund site was dredged from the Sabine

Lake and placed on the State Marine site and the site north of State Marine, Palmer Barge
Superfund Site.

B. Adequacy of O&M

Deed restrictions (restrictive covenants) preventing residential use of the property are in place and
there are no residences on the property.

C. Early Indicators of Potential Remedy Failure

A potential remedy failure is the placement of sediment dredged from offshore the State Marine
site on to the site, the Palmer Barge Superfund site, and the property north of the Palmer Barge
Superfund site. This sediment needs to be tested to verify it does not pose a risk to human health
and/or the environment.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

None.

INSPECTION TEAM ROSTER

[illegible]

ATTACHMENT 9
SITE INSPECTION PHOTOGRAPHS

Site Inspection Photographs
State Marine Superfund Site Five-Year Review



Photograph No. 1
Site: State Marine Superfund Site
Description: View of site entrance facing east from Pleasure Islet Road.
Date: November 10, 2011



Photograph No. 2
Site: State Marine Superfund Site
Description: Continued view of site entrance.
Date: November 10, 2011

Site Inspection Photographs
State Marine Superfund Site Five-Year Review



Photograph No. 5

Site: State Marine Superfund Site

Description: Barge cleaning facilities.

Date: November 10, 2011



Photograph No. 6

Site: State Marine Superfund Site

Description: Equipment associated with the barge cleaning facility.

Date: November 10, 2011

Site Inspection Photographs
State Marine Superfund Site Five-Year Review



Photograph No. 7 Site: State Marine Superfund Site
Description: Equipment associated with the barge cleaning facility.
Date: November 10, 2011



Photograph No. 8 Site: State Marine Superfund Site
Description: Barge cleaning equipment located onsite.
Date: November 10, 2011



Photograph No. 9 Site: State Marine Superfund Site
Description: Barge cleaning equipment located onsite.
Date: November 10, 2011



Photograph No. 10 Site: State Marine Superfund Site
Description: Barge cleaning equipment located onsite.
Date: November 10, 2011

Page 6 of 14

Site Inspection Photographs
State Marine Superfund Site Five-Year Review



Photograph No. 13 Site: State Marine Superfund Site
Description: Barge docking area, barge located on the right.
Date: November 10, 2011



Photograph No. 14 Site: State Marine Superfund Site
Description: Barge docked in the barge docking area.
Date: November 10, 2011

A large, dark, rusted metal structure, possibly a ship's hull or a large container, dominates the foreground. The structure is heavily weathered and shows signs of significant corrosion. In the background, a red structure with yellow accents is visible, along with a clear blue sky and some distant industrial or construction equipment.

Page 8 of 14

Site Inspection Photographs
State Marine Superfund Site Five-Year Review



Photograph No. 17 Site: State Marine Superfund Site
Description: Concrete stabilization blocks along the edge of the barge docking area.
Exposed landfill debris in contact with Lake Sabine.
Date: November 10, 2011



Photograph No. 18 Site: State Marine Superfund Site
Description: View facing southwest of exposed landfill debris in the foreground,
dredge material in the background.
Date: November 10, 2011



Photograph No. 19 Site: State Marine Superfund Site
Description: View facing northwest, of exposed landfill debris and the barge
cleaning facility in the background.
Date: November 10, 2011



Photograph No. 20 Site: State Marine Superfund Site
Description: View facing southeast of exposed landfill debris.
Date: November 10, 2011



Photograph No. 21 Site: State Marine Superfund Site
Description: Western shore of the site with landfill debris exposed to Lake Sabine.
Date: November 10, 2011



Photograph No. 22 Site: State Marine Superfund Site
Description: Western shore of the site with landfill debris covered with concrete stabilization blocks, both exposed to Lake Sabine.
Date: November 10, 2011

Site Inspection Photographs
State Marine Superfund Site Five-Year Review



Photograph No. 23

Site: State Marine Superfund Site

Description: Western shore of the site with landfill debris exposed to Lake Sabine.

Date: November 10, 2011



Photograph No. 24

Site: State Marine Superfund Site

Description: Western shore of the site with landfill debris exposed to Lake Sabine.

Date: November 10, 2011



Photograph No. 25 Site: State Marine Superfund Site
Description: Western shore of the site with landfill debris exposed to Lake Sabine.
Date: November 10, 2011



Photograph No. 26	Site: State Marine Superfund Site
Description: View of the southern portion of the site facing north of the dredge material placed upon the site.	
Date: November 10, 2011	

Site Inspection Photographs
State Marine Superfund Site Five-Year Review



Photograph No. 27

Site: State Marine Superfund Site

Description: View of the northeast corner of the site; garbage and fill material placed along the western shoreline.

Date: November 10, 2011

ATTACHMENT 10
INTERVIEW RECORDS – SITE SURVEYS

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY		
Site Name: State Marine of Port Arthur Superfund Site		EPA ID No.: TXD099801102
Location: Port Arthur, Jefferson County, Texas 77642		Date: 11/10/11
Contact Made By:		
Name: Rafael Casanova	Title: Remedial Project Manager	Organization: U.S. EPA
Telephone No.: (214) 665-7437 E-Mail: casanova.Rafael@ epa.gov	Street Address: 1445 Ross Avenue, Suite 1200 City, State, Zip: Dallas, Texas, 75202	
Name: Stan Wallace	Title: Project Manager	Organization: EA Engineering, Science, and Technology, Inc.
Telephone No.: (972) 315-3922 E-Mail: swallace@eaest.com	Street Address: 405 S. Highway 121, Building C, Suite 100 City, State, Zip: Lewisville, Texas 75067	
Individual Contacted:		
Name: Rafael Casanova	Title: Remedial Project Manager	Organization: U.S. EPA
Telephone No.: (214) 665-7437 E-Mail Address: casanova.rafael@epa.gov	Street Address: 1445 Ross Avenue, Suite 1200 City, State, Zip: Dallas, Tx, 75202	
Survey Questions		
<p><i>The purpose of the five-year review is to evaluate the implementation and performance of the remedy, and to confirm that human health and the environment continue to be protected by the remedial actions that have been performed at the site. This interview is being conducted as a part of the first five-year review for the State Marine of Port Arthur Superfund Site. The scope of the review is from April 2007 to present.</i></p>		
<p>1. What is your general impression of the work conducted at the site during this review period?</p> <p>The work meets the requirements of the EPA's Record of Decision.</p>		

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date: 11/10/11

2. From your perspective, what effects have site operations had on the surrounding community?
Current Site operations have enhanced industrial activity and property reuse for commercial purposes.

Survey Questions (Continued)

3. During this review period, are you aware of any community concerns regarding the site or its operation and administration? Yes.

If so, please provide details.

The previous owner of the Site has expressed concerns about the recontamination of the Site by the current operator.

4. Are you aware of any events, incidents, or activities at the site during this review period, such as vandalism, trespassing, or emergency responses from local authorities? No

If so, please provide details.

5. Do you feel well informed about the site's activities and progress? Yes.

If not, please indicate how you would like to be informed about the site activities – for example, by e-mail, regular mail, fact sheets, meetings, etc.

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY	
Site Name: State Marine of Port Arthur Superfund Site	EPA ID No.: TXD099801102
Location: Port Arthur, Jefferson County, Texas 77642	Date: 11/10/11
<p>6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation? No.</p>	
<p align="center">Survey Questions (Continued)</p>	
<p>7. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? Yes.</p> <p>If so, please describe the purpose and results.</p> <p>This site inspection was performed as a part of the Five-Year Review process.</p>	
<p>8. Have there been any complaints, violations, or other incidents related to the site that required a response by your office? No.</p> <p>If so, please summarize the events and results.</p>	
<p>9. Are you aware of any problems or difficulties encountered which impacted the effectiveness of the remedial action or caused a change in operation and maintenance procedures?</p> <p>A significant amount of fill material was observed to have been deposited onto the surface of the ground during the site inspection.</p> <p>If so, please describe changes and impacts.</p> <p>Any impacts will be determined during the Five-Year Review process.</p>	

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY	
Site Name: State Marine of Port Arthur Superfund Site	EPA ID No.: TXD099801102
Location: Port Arthur, Jefferson County, Texas 77642	Date: 11/10/11
<p>10. Have there been any changes in state or federal environmental standards which may call into question the protectiveness or effectiveness of the remedial action? None that I am aware of.</p>	
<p align="center">Survey Questions (Continued)</p>	
<p>11. Do you know of opportunities to optimize the operation, maintenance, or sampling efforts at the site? No.</p>	

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY	
Site Name: State Marine of Port Arthur Superfund Site	EPA ID No.: TXD099801102
Location: Port Arthur, Jefferson County, Texas 77642	Date: 11/10/11
<p>Please add any other comments in the space below.</p> <p>This survey was filled as a result of my participation during the Five-Year Review site inspection and recent appointment as the EPA's Remedial Project Manager for the Site.</p>	

NOV 28 2011

EA ENG. DALLAS

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date:

Contact Made By:

Name: Rafael Casanova

Title: Remedial Project Manager

Organization: U.S. EPA

Telephone No.: (214) 665-7437

E-Mail: Casanova.Rafael@epa.gov

Street Address: 1445 Ross Avenue, Suite 1200

City, State, Zip: Dallas, Texas 75202

Name: Stan Wallace

Title: Project Manager

Organization: EA Engineering,
Science, and Technology, Inc.

Telephone No.: (972) 315-3922

E-Mail: swallace@eaest.com

Street Address: 405 S. Highway 121, Building C, Suite 100

City, State, Zip: Lewisville, Texas 75067

Individual Contacted:

Name: Randy Cooper

Title: OPERATIONS MNG.

Organization: TCGF

Telephone No.: 409 962 8800

E-Mail Address:

Street Address: 8700 YACHT CLUB RD

City, State, Zip: Port Arthur, TX 77642

Survey Questions

The purpose of the five-year review is to evaluate the implementation and performance of the remedy, and to confirm that human health and the environment continue to be protected by the remedial actions that have been performed at the site. This interview is being conducted as a part of the first five-year review for the State Marine of Port Arthur Superfund Site. Should you choose to respond, please return your survey form to Stan Wallace at EA Engineering, Science, and Technology, Inc. via e-mail or U.S. Postal Service by 14 November 2011. The scope of the review is from April 2007 to present.

1. What is your general impression of the work conducted at the site during this review period?

Positive

2. From your perspective, what effects have site operations had on the surrounding community?

THE Efforts have enabled the Site to be developed which has and will create Jobs for the Community

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date: 11-11-11

Survey Questions (Continued)

3. During this review period, are you aware of any community concerns regarding the site or its operation and administration? If so, please provide details.

NO

4. Are you aware of any events, incidents, or activities at the site during this review period, such as vandalism, trespassing, or emergency responses from local authorities? If so, please provide details.

NO

5. Do you feel well informed about the site's activities and progress? If not, please indicate how you would like to be informed about the site activities – for example, by e-mail, regular mail, fact sheets, meetings, etc.

N/A

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

NONE

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date: 11-11-11

Survey Questions (Continued)

7. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please describe the purpose and results.

not to my knowledge

8. Have there been any complaints, violations, or other incidents related to the site that required a response by your office? If so, please summarize the events and results.

no

9. Are you aware of any problems or difficulties encountered which impacted the effectiveness of the remedial action or caused a change in operation and maintenance procedures? If so, please describe changes and impacts.

no

10. Have there been any changes in state or federal environmental standards which may call into question the protectiveness or effectiveness of the remedial action?

not to my knowledge

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date: 11 - 21 - 11

Survey Questions (Continued)

11. Do you know of opportunities to optimize the operation, maintenance, or sampling efforts at the site?

no

Please add any other comments in the space below.

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date:

Contact Made By:

Name: Rafael Casanova

Title: Remedial Project Manager

Organization: U.S. EPA

Telephone No.: (214) 665-7437

E-Mail: Casanova.Rafael@epa.gov

Street Address: 1445 Ross Avenue, Suite 1200

City, State, Zip: Dallas, Texas 75202

Name: Stan Wallace

Title: Project Manager

Organization: EA Engineering, Science, and Technology, Inc.

Telephone No.: (972) 315-3922

E-Mail: swallace@eaest.com

Street Address: 405 S. Highway 121, Building C, Suite 100

City, State, Zip: Lewisville, Texas 75067

Individual Contacted:

Name: David Durrett

Title: President/CEO

Organization: New Birmingham, Inc.

Telephone No.: (903) 683-4900

E-Mail Address:

Street Address: 12977 U.S. Highway 84 W

City, State, Zip: Rusk, TX 75785

Survey Questions

The purpose of the five-year review is to evaluate the implementation and performance of the remedy, and to confirm that human health and the environment continue to be protected by the remedial actions that have been performed at the site. This interview is being conducted as a part of the first five-year review for the State Marine of Port Arthur Superfund Site. Should you choose to respond, please return your survey form to Stan Wallace at EA Engineering, Science, and Technology, Inc. via e-mail or U.S. Postal Service by 14 November 2011. The scope of the review is from April 2007 to present.

1. What is your general impression of the work conducted at the site during this review period?

Good. The site has been cleaned & in past 12 months a new tenant has built a facility & began operations.

2. From your perspective, what effects have site operations had on the surrounding community?

Positive effects. The site is much cleaner & cleared from debris.

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date:

Survey Questions (Continued)

3. During this review period, are you aware of any community concerns regarding the site or its operation and administration? If so, please provide details.

No

4. Are you aware of any events, incidents, or activities at the site during this review period, such as vandalism, trespassing, or emergency responses from local authorities? If so, please provide details.

No

5. Do you feel well informed about the site's activities and progress? If not, please indicate how you would like to be informed about the site activities – for example, by e-mail, regular mail, fact sheets, meetings, etc.

Yes

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

No

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date:

Survey Questions (Continued)

7. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please describe the purpose and results.

We have been in constant contact with the new tenant who has begun operations in the past 12 months. Prior to that our company was on site more often cleaning & clearing debris & trash.

8. Have there been any complaints, violations, or other incidents related to the site that required a response by your office? If so, please summarize the events and results.

No

9. Are you aware of any problems or difficulties encountered which impacted the effectiveness of the remedial action or caused a change in operation and maintenance procedures? If so, please describe changes and impacts.

No

10. Have there been any changes in state or federal environmental standards which may call into question the protectiveness or effectiveness of the remedial action?

No

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date:

Survey Questions (Continued)

11. Do you know of opportunities to optimize the operation, maintenance, or sampling efforts at the site?

No

Please add any other comments in the space below.

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY		
Site Name: State Marine of Port Arthur Superfund Site		EPA ID No.: TXD099801102
Location: Port Arthur, Jefferson County, Texas 77642		Date: December 9, 2011
Contact Made By:		
Name: Rafael Casanova	Title: Remedial Project Manager	Organization: U.S. EPA
Telephone No.: (214) 665-7437 E-Mail: Casanova.Rafael@epa.gov	Street Address: 1445 Ross Avenue, Suite 1200 City, State, Zip: Dallas, Texas 75202	
Name: Stan Wallace	Title: Project Manager	Organization: EA Engineering, Science, and Technology, Inc.
Telephone No.: (972) 315-3922 E-Mail: swallace@eaest.com	Street Address: 405 S. Highway 121, Building C, Suite 100 City, State, Zip: Lewisville, Texas 75067	
Individual Contacted:		
Name: Olga Salinas	Title: Houston Superfund Matrix Team	Organization: TCEQ
Telephone No.: (713) 767-3721 E-Mail Address:	Street Address: City, State, Zip:	
Survey Questions		
<p><i>The purpose of the five-year review is to evaluate the implementation and performance of the remedy, and to confirm that human health and the environment continue to be protected by the remedial actions that have been performed at the site. This interview is being conducted as a part of the first five-year review for the State Marine of Port Arthur Superfund Site. Should you choose to respond, please return your survey form to Stan Wallace at EA Engineering, Science, and Technology, Inc. via e-mail or U.S. Postal Service by 14 November 2011. The scope of the review is from April 2007 to present.</i></p>		
<p>1. What is your general impression of the work conducted at the site during this review period?</p> <p>Response: As the Texas Commission on Environmental Quality (TCEQ) project manager for the site, I have only been involved in the Five-Year Review of the site conducted on November 10, 2011. The site was recently transferred to me on November 1, 2011. The TCEQ is satisfied with the overall work conducted at the site.</p>		
<p>2. From your perspective, what effects have site operations had on the surrounding community?</p> <p>Response: The TCEQ is not aware of any site operations which effected the surrounding community.</p>		

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date: December 9, 2011

Survey Questions (Continued)

3. During this review period, are you aware of any community concerns regarding the site or its operation and administration? If so, please provide details.

Response: The TCEQ is not aware of any community concerns regarding the site or its operation and administration.

4. Are you aware of any events, incidents, or activities at the site during this review period, such as vandalism, trespassing, or emergency responses from local authorities? If so, please provide details.

Response: In 2008 the entire site was submerged during the storm surge of Hurricane Ike. At the time TCEQ and EPA inspectors visited the site it was covered with piles of vegetation debris and they did not consider it safe to walk through the thick vegetation on the site, so a more detailed report of the site's condition was not available. From their observations, Hurricane Ike did not cause a release of hazardous substances from the site.

5. Do you feel well informed about the site's activities and progress? If not, please indicate how you would like to be informed about the site activities – for example, by e-mail, regular mail, fact sheets, meetings, etc.

Response: The TCEQ is well informed about the site's activities and progress. TCEQ wishes to be notified of any activities at the site where TCEQ needs to be present. The TCEQ requires a week's notice via email to prepare travel arrangements and travel approval.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

Response: The TCEQ has no comments, suggestions, or recommendations regarding the site's management or operation.

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date: December 9, 2011

Survey Questions (Continued)

7. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please describe the purpose and results.

Response: The TCEQ made a site visit to the site on May 2010 to inspect the site due to an I2 Project. The purpose of the I2 Project was to make site visits to all Superfund sites and report any concerns regarding the site which may pose a threat to the community and the environment. The I2 Project also was used to update project managers of the current condition of the site (fence condition, vandalism, evidence of trespassing, condition of vegetation and security of site). On May 2010, TCEQ attempted to inspect the site; however, TCEQ staff could not enter the site due to the site being locked. From outside the fence, TCEQ could not see any major concerns or threats at the site.

8. Have there been any complaints, violations, or other incidents related to the site that required a response by your office? If so, please summarize the events and results.

Response: The TCEQ is not aware of any complaints, violations, or other incidents related to the site.

9. Are you aware of any problems or difficulties encountered which impacted the effectiveness of the remedial action or caused a change in operation and maintenance procedures? If so, please describe changes and impacts.

Response: The TCEQ is not aware of any problem or difficulties encountered which would have impacted the effectiveness of the remedial action or cause a change in operation and maintenance procedures.

10. Have there been any changes in state or federal environmental standards which may call into question the protectiveness or effectiveness of the remedial action?

Response: No. TCEQ is not aware of any changes in state or federal environmental standards which may call in question the protectiveness or effectiveness of the remedial action.

SUPERFUND FIVE-YEAR REVIEW SITE SURVEY

Site Name: State Marine of Port Arthur Superfund Site

EPA ID No.: TXD099801102

Location: Port Arthur, Jefferson County, Texas 77642

Date: December 9, 2011

Survey Questions (Continued)

11. Do you know of opportunities to optimize the operation, maintenance, or sampling efforts at the site?

Response: No. All cleanup work has been successfully completed at Palmer Barge. The TCEQ is informed that the EPA is in the process of deleting State Marine of Port Arthur from the NPL list.

Please add any other comments in the space below.

ATTACHMENT 11

INSTITUTIONAL CONTROLS – RESTRICTIVE COVENANTS



RESTRICTIVE COVENANT

STATE OF TEXAS §
 §
COUNTY OF JEFFERSON §

This Restrictive Covenant is filed to provide information concerning certain environmental conditions and use limitations pursuant to the Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program Rule (TRRP) found at 30 Texas Administrative Code (TAC), Chapter 350, and affects the real property (Property) described in Exhibit A, attached hereto and incorporated herein by reference, being the 1.395 acre tract of land, more or less, described in the General Warranty Deed from Andrew Michael Slay Trust, et al., to NBR Maritime II, LLC, recorded on July 15, 2010, as File No. 2010026005, Official Public Records, County Clerk, Jefferson County, Texas.

Portions of the soils and groundwater of the Property contain certain identified chemicals of concern causing the Property to be considered an Affected Property as that term is defined in the TRRP.

This Restrictive Covenant is required for the following reasons:

The Property currently meets TRRP standards for commercial / industrial use. Based on the reports, the chemicals of concern pose no significant present or future risk to humans or the environment based on commercial / industrial land use. No further remediation of the Property is required by the TCEQ as long as the Property is not to be used for residential purposes. If any person desires in the future to use the Property for residential purposes, the TCEQ must be notified at least 60 days in advance of such use and additional response actions may be necessary before the Property may be used for residential purposes. Persons contemplating a change in land use for the Property are encouraged to review the definitions for commercial / industrial and residential land use contained in TRRP as the definition of residential land use is broad.

As of the date of this Restrictive Covenant, the record owner of fee title to the Property is NBR Maritime II, LLC (Owner) with an address of 12977 US Highway 84 West, Rusk, Texas 75785.

In consideration of the Response Actions by NBR Maritime II, LLC (Responder), approval of the Response Action Completion Report, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Owner has agreed to place the following restrictions on the Property in favor of the TCEQ and the State of Texas, to-wit:

1. The Property shall not be used for any purposes other than commercial / industrial uses, as defined in 30 Texas Administrative Code, Chapter 350, Section 350.4(a)(13).
2. These restrictions shall be a covenant running with the land.

For additional information, contact:

TCEQ
Central Records
12100 Park 35 Circle,
Building E
Austin, Texas 78753

Mail: TCEQ - MC 199
P O Box 13087
Austin, Texas 78711-3087


TCEQ Program and Identifier Nos.:

1. Superfund SUP036 - State Marine of Port Arthur
2. Superfund SUP133 - Palmer Barge Lines

This Restrictive Covenant may be rendered of no further force or effect only by a release executed by the TCEQ or its successor agencies and filed in the same Real Property Records as those in which this Restrictive Covenant is filed.

Executed this 3rd day of March, 2011.

NBR Maritime II, LLC

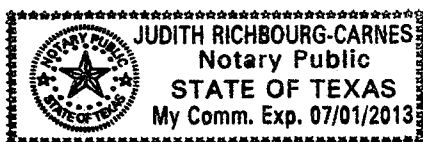
By: 
David Durrett, Manager of
New Birmingham Resources, LLC,
Manager of NBR Maritime II, LLC

STATE OF TEXAS

COUNTY OF CHEROKEE

BEFORE ME, on this the 3rd day of March, 2011, personally appeared David Durrett, Manager of New Birmingham Resources, LLC, Manager of NBR Maritime II, LLC, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 3rd day of March, 2011.



Judith Richbourg-Carnes
Notary Public, State of Texas
My Commission Expires: 7/01/2013

Accepted as Third Party Beneficiary this 18 day of March, 2011.

Texas Commission on Environmental Quality

By: [Signature]
Name: Brent Wade

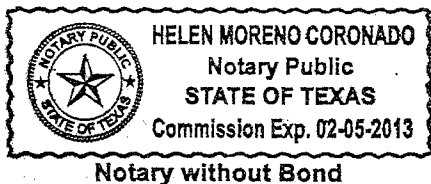
Title: Director, Remediation Division

STATE OF TEXAS

COUNTY OF TRAVIS

BEFORE ME, on this the 18th day of March, 2011, personally appeared Brent Wade, Director of the Remediation Division of the Texas Commission on Environmental Quality, known to me to be the person whose name is subscribed to the foregoing instrument, and they acknowledged to me that they executed the same for the purposes and in the capacity herein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 18th day of March, 2011.



[Signature]
Notary Public, State of Texas
My Commission Expires: 02-05-2013

After Recording Return a Certified Copy To:

TCEQ - MC 199
P O Box 13087
Austin, Texas 78711-3087

EXHIBIT A TO RESTRICTIVE COVENANT - Page 1 of 3
1.395 ACRE TRACT

BEING 1.395 acres of land and water out of and a part of what is commonly referred to as Pleasure Islet; being part of Tract 2, 3, and 6 out of that certain (Called 92.563) acre tract of land conveyed to Pleasure Islet Associates, duly authorized by Resolution No. 81-188 dated July 13, 1981, of the City Council, City of Port Arthur; and being out of that certain (Called 1877.94) acre tract of land conveyed to the City of Port Arthur, Texas, by patent recorded in Volume 1014, Page 476, Deed Records, Jefferson County, Texas; said 1.395 acre tract being more fully described by metes and bounds as follows, to wit:

BEGINNING at a MAG nail found for a common corner of Tracts 6 and 7 on the apparent centerline of an improved, unrestricted public used roadway known as Old Yacht Club Road; said MAG nail being the Northwest corner of a tract of land conveyed to Pleasure Islet, LLC, recorded in File No. 9533086, Official Public Records, Jefferson County, Texas, and the Southwest corner of a (Called 24.178) acre tract of land and water conveyed to NBR Maritime II, LLC, recorded in File No. 2008020974, Official Public Records, Jefferson County, Texas;

THENCE, South 88 deg., 31 min., 53 sec., East, on the common line of said Tracts 6 and 7 and the South line of the (Called 24.178) acre tract, a distance of 30.00' passing a ½" steel rod found on the apparent East right of way line of said Old Yacht Club Road, having a State Plane Coordinate of North: 13931816.83, East: 3595015.36; continuing a distance of 280.41' passing a ½" steel rod, capped and marked "SOUTEX", found for reference point; continuing for a total distance of 380.41' to a point in the waters of Sabine Neches Ship Channel; said point being an angle point on the South line of the (Called 24.178) acre tract;

THENCE, North 48 deg., 39 min., 56 sec., East, continuing on the South line of the (Called 24.178) acre tract, a distance of 226.84' to a point for corner in the water for the **POINT OF BEGINNING**; said point for corner being the most Southerly corner of the herein described tract;

THENCE, the following calls on the East line of the (Called 24.178) acre tract:

North 19 deg., 33 min., 53 sec., West, a distance of 119.00' to a point for corner;

North 06 deg., 44 min., 20 sec., East, a distance of 265.15 to a point for corner;

North 20 deg., 44 min., 06 sec., East, a distance of 305.71' to a point for corner;

North 40 deg., 05 min., 02 sec., East, a distance of 434.26' to a point for corner;

North 82 deg., 27 min., 12 sec., East, a distance of 75.04' to a point for corner;

North 20 deg., 55 min., 14 sec., East, a distance of 31.42' to a point for corner;

EXHIBIT A TO RESTRICTIVE COVENANT - Page 2 of 3
1.395 ACRE TRACT (CONTINUED)

North 18 deg., 23 min., 58 sec., East 430.85, to a point for corner being the Northeast corner of the (Called 24.178) acre tract; said point for corner being the Southeast corner of a (Called 8.926) acre tract of land conveyed to NBR Maritime I, LLC, recorded in File No. 2008020973, Official Public Records, Jefferson County, Texas; also being the most Northerly corner of the herein described tract;

THENCE, South 40 deg., 34 min., 10 sec., East, a distance of 36.26' to a point for corner in the water of said Sabine Neches Ship Channel;

THENCE, South 11 deg., 36 min., 28 sec., West, a distance of 186.34' to a point for corner in the water;

THENCE, South 21 deg., 07 min., 59 sec., West, a distance of 283.19' to a point for corner in the water;

THENCE, South 82 deg., 40 min., 07 sec., West, a distance of 75.06' to a point for corner in the water;

THENCE, South 40 deg., 17 min., 41 sec., West, a distance of 434.25' to a point for corner;

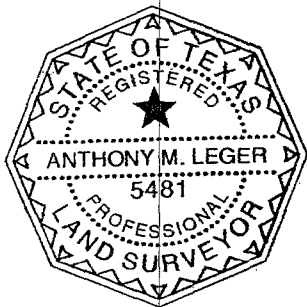
THENCE, South 20 deg., 59 min., 40 sec., West, a distance of 316.32' to a point for corner in the water of said Sabine Neches Ship Channel;

THENCE, South 12 deg., 56 min., 01 sec., West, a distance of 229.32' to a point for corner in the water;

THENCE, South 18 deg., 02 min., 07 sec., East, a distance of 113.13' to the **POINT OF BEGINNING** and containing 1.395 acres of land and water.

Note: Bearings, distances, and acreage are based on State Plane Coordinate Grid System Texas South-Central Zone, NAD 83, scale factor=0.999922310, convergence=2 degrees, 31 min., 01 sec.

This Description and Survey prepared by Anthony M. Leger, Registered Professional Land Surveyor No. 5481, on March 29, 2010.



1.395 ACRES OF LAND AND WATER
PART OF PLEASURE ISLET,
CITY OF PORT ARTHUR,
JEFFERSON COUNTY, TEXAS

BEING 1.395 acres of land and water out of and a part of what is commonly referred to as Pleasure Islet; being part of Tract 2, 3, and 6 out of that certain (Called 52,563) acre tract of land conveyed to Pleasure Islet Associates, duly authorized by Resolution No. 81-185 dated July 13, 1981, of the City Council, City of Port Arthur, and being out of that certain (Called 1877,845) acre tract of land conveyed to the City of Port Arthur, Texas, by patent recorded in Volume 1014, Page 478, Deed Records, Jefferson County, Texas; said 1.395 acre tract being more fully described by metes and bounds as follows, to wit:

BEGINNING at a MAG nail found for a common corner of Tracts 6 and 7 on the apparent centerline of an improved, unrestricted public used roadway known as Old Yacht Club Road; said MAG nail being the Northeast corner of a tract of land conveyed to Pleasure Islet, L.L.C. recorded in File No. 3533086, Official Public Records, Jefferson County, Texas; and the Southwest corner of a (Called 24,178) acre tract of land and water conveyed to NBR Maritime II, L.L.C. recorded in File No. 2008020974, Official Public Records, Jefferson County, Texas;

THENCE South 88 deg., 31 min., 53 sec., East, on the common line of said Tracts 6 and 7 and the South line of the (Called 24,178) acre tract, a distance of 30.00' passing a 1/2" steel rod found on the apparent East right of way line of said Old Yacht Club Road, having a State Plane Coordinate of Northing: 13931816.53, East: 3552013.36; continuing a distance of 280.41' passing a 1/2" steel rod, capped and marked "SOUTEX", found for reference point; continuing for a total distance of 380.41' to a point in the waters of Sabine Neches Ship Channel; said point being an angle point on the South line of the (Called 24,178) acre tract;

THENCE North 48 deg., 39 min., 56 sec., East, continuing on the South line of the (Called 24,178) acre tract, a distance of 226.84' to a point for corner in the water for the POINT OF BEGINNING, said point for corner being the most Southerly corner of the herein described tract;

THENCE, the following calls on the East line of the (Called 24,178) acre tract:

North 19 deg., 33 min., 53 sec., West, a distance of 119.00' to a point for corner;

North 06 deg., 44 min., 20 sec., East, a distance of 265.15 to a point for corner;

North 20 deg., 44 min., 05 sec., East, a distance of 305.71' to a point for corner;

North 40 deg., 05 min., 02 sec., East, a distance of 434.26' to a point for corner;

North 82 deg., 27 min., 12 sec., East, a distance of 75.04' to a point for corner;

North 20 deg., 55 min., 14 sec., East, a distance of 31.42' to a point for corner;

North 18 deg., 23 min., 58 sec., East 430.85, to a point for corner being the Northeast corner of the (Called 24,178) acre tract; said point for corner being the Southeast corner of a (Called 8,928) acre tract of land conveyed to NBR Maritime I, L.L.C. recorded in File No. 2008020973, Official Public Records, Jefferson County, Texas; also being the most Northerly corner of the herein described tract;

THENCE South 40 deg., 34 min., 10 sec., East, a distance of 35.26' to a point for corner in the water of said Sabine Neches Ship Channel;

THENCE South 11 deg., 36 min., 28 sec., West, a distance of 186.34' to a point for corner in the water;

THENCE South 21 deg., 07 min., 59 sec., West, a distance of 283.19' to a point for corner in the water;

THENCE South 40 deg., 40 min., 07 sec., West, a distance of 75.06' to a point for corner in the water;

THENCE South 40 deg., 17 min., 41 sec., West, a distance of 434.25' to a point for corner;

THENCE South 20 deg., 59 min., 40 sec., West, a distance of 316.32' to a point for corner in the water of said Sabine Neches Ship Channel;

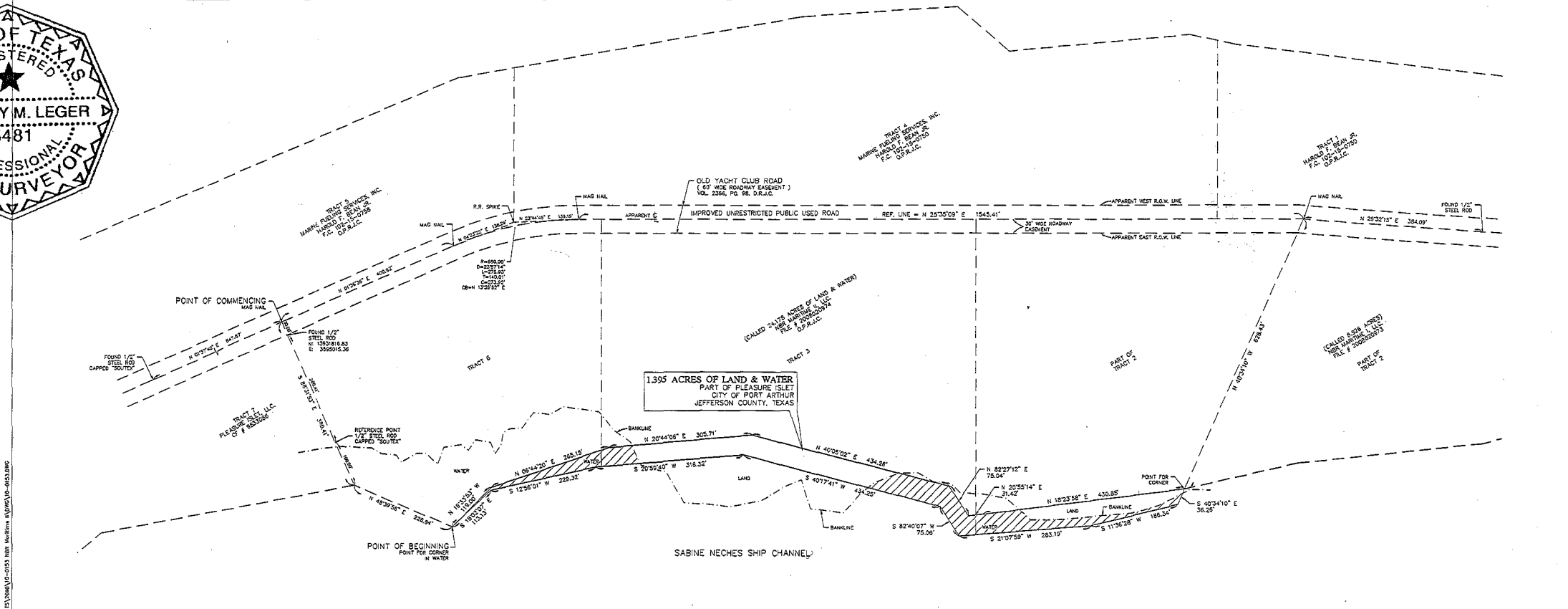
THENCE South 12 deg., 55 min., 01 sec., West, a distance of 229.32' to a point for corner in the water;

THENCE South 18 deg., 02 min., 07 sec., East, a distance of 113.13' to the POINT OF BEGINNING and containing 1.395 acres of land and water.

Note: Bearings, distances, and acreage are based on State Plane Coordinate Grid System Texas South-Central Zone, NAD 83, scale factor = 0.999922310, convergence = 2 degrees, 31 min., 01 sec.

This Description and Survey prepared by Anthony M. Leger, Registered Professional Land Surveyor No. 5481, on March 29, 2010.

NBR Maritime II
LS-10-0153A



<p>DECLARATION OF SURVEYOR</p> <p>The undersigned does hereby certify that this survey was this day <u>20100329</u> made of the property fully described herein and is correct, and that said property has been to and from a dedicated roadway and survey is verified for this purpose only. It is to be noted and that said property has been to and from an improved unrestricted public used roadway. This survey is certified for the transaction only, it is not transferable to additional transactions or subsequent owners.</p> <p>ANTHONY M. LEGER REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5481</p>	<p>NOTES</p> <p>1. BEARINGS, DISTANCES, AND ACREAGE SHOWN ARE BASED ON STATE PLANE COORDINATE GRID SYSTEM, TEXAS SOUTH-CENTRAL ZONE, NAD83 SCALE FACTOR = 0.999922310 CONVERGENCE: 2° 31' 01"</p>	<p>SOUTEX SURVEYORS</p> <p>3737 Doctors Drive Port Arthur, Texas 77642 Tel. 409.983.2004 Fax. 409.983.2005 soutexsurveyors.com</p>	<p>SHEET TITLE</p> <p>1.395 ACRES OF LAND AND WATER PART OF PLEASURE ISLET, CITY OF PORT ARTHUR RECORDED IN VOL. 1014, PG. 476, DEED RECORDS JEFFERSON COUNTY, TEXAS</p> <p>PROJECT</p> <p>NBR MARITIME II OLD YACHT CLUB ROAD PORT ARTHUR, TEXAS 77642</p>		<p>PROJ. NO: 10-0153A SCALE: 1" = 100' PRINT DATE: 31MAR2010 DRAWN BY: R. COLLIER CHECKED BY: BL APPROVED BY: AML</p>
			<p>SHEET 1 OF 1</p>		

FILED AND RECORDED

OFFICIAL PUBLIC RECORDS

Carolyn L Guidry

2011 Mar 25, 10:44 AM

2011010069

PEVETO: \$36.00

CAROLYN L. GUIDRY, COUNTY CLERK

JEFFERSON COUNTY, TEXAS

PART OF FOREGOING
INSTRUMENT ILLEGIBLE
AT TIME OF FILING

**RESTRICTIVE COVENANT**

STATE OF TEXAS §
 §
COUNTY OF JEFFERSON §

This Restrictive Covenant is filed to provide information concerning certain environmental conditions and use limitations pursuant to the Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program Rule (TRRP) found at 30 Texas Administrative Code (TAC), Chapter 350, and affects the real property (Property) described in Exhibit A, attached hereto and incorporated herein by reference, being the same 8.926 acre tract of land, more or less, described in the Deed Without Warranty from Birch Trust to Golden Triangle Maritime, LLC (n/k/a NBR Maritime I, LLC), recorded on January 17, 2007, as instrument number 2007002282, Official Public Records, County Clerk, Jefferson County, Texas.

Portions of the soils and groundwater of the Property contain certain identified chemicals of concern causing the Property to be considered an Affected Property as that term is defined in the TRRP.

This Restrictive Covenant is required for the following reasons:

The Property currently meets TRRP standards for commercial / industrial use. Based on the reports, the chemicals of concern pose no significant present or future risk to humans or the environment based on commercial / industrial land use. No further remediation of the Property is required by the TCEQ as long as the Property is not to be used for residential purposes. If any person desires in the future to use the Property for residential purposes, the TCEQ must be notified at least 60 days in advance of such use and additional response actions may be necessary before the Property may be used for residential purposes. Persons contemplating a change in land use for the Property are encouraged to review the definitions for commercial / industrial and residential land use contained in TRRP as the definition of residential land use is broad.

As of the date of this Restrictive Covenant, the record owner of fee title to the Property is NBR Maritime I, LLC (f/k/a Golden Triangle Maritime, LLC) (Owner) with an address of 12977 US Highway 84 West, Rusk, Texas 75785.

In consideration of the Response Actions by NBR Maritime I, LLC (f/k/a Golden Triangle Maritime, LLC) (Responder), approval of the Response Action Completion Report, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Owner has agreed to place the following restrictions on the Property in favor of the TCEQ and the State of Texas, to-wit:

1. The Property shall not be used for any purposes other than commercial / industrial uses, as defined in 30 Texas Administrative Code, Chapter 350, Section 350.4(a)(13).
2. These restrictions shall be a covenant running with the land.

For additional information, contact:

TCEQ
Central Records
12100 Park 35 Circle,
Building E
Austin, Texas 78753

Mail: TCEQ - MC 199
P O Box 13087
Austin, Texas 78711-3087

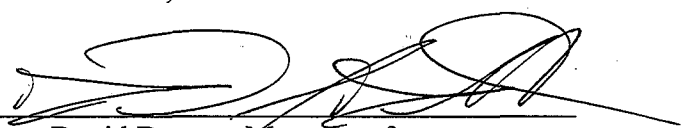
TCEQ Program and Identifier Nos.: Superfund SUP133 - Palmer Barge Lines.

This Restrictive Covenant may be rendered of no further force or effect only by a release executed by the TCEQ or its successor agencies and filed in the same Real Property Records as those in which this Restrictive Covenant is filed.

Executed this 3rd day of March, 2011.

NBR Maritime I, LLC

By:

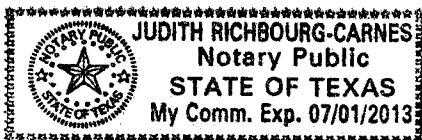

David Durrett, Manager of
New Birmingham Resources, LLC,
Manager of NBR Maritime I, LLC

STATE OF TEXAS

COUNTY OF CHEROKEE

BEFORE ME, on this the 3rd day of March, 2011, personally appeared David Durrett, Manager of New Birmingham Resources, LLC, Manager of NBR Maritime I, LLC, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 3rd day of March, 2011.



Judith Richbourg-Carnes
Notary Public, State of Texas
My Commission Expires: 7/01/2013

Accepted as Third Party Beneficiary this 18 day of March, 2011.

Texas Commission on Environmental Quality

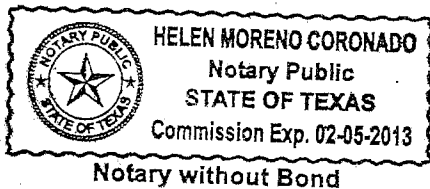
By: Brent Wade
Name: Brent Wade
Title: Director, Remediation Division

STATE OF TEXAS

COUNTY OF TRAVIS

BEFORE ME, on this the 18th day of March, 2011, personally appeared Brent Wade, Director of the Remediation Division of the Texas Commission on Environmental Quality, known to me to be the person whose name is subscribed to the foregoing instrument, and they acknowledged to me that they executed the same for the purposes and in the capacity herein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 18th day of March, 2011.



Helen Moreno Coronado
Notary Public, State of Texas
My Commission Expires: 02-05-2013

After Recording Return a Certified Copy To:

TCEQ - MC 199
P O Box 13087
Austin, Texas 78711-3087

EXHIBIT A TO RESTRICTIVE COVENANT
8.926 ACRE TRACT

BEING 8.926 (Called 8.902) acres of land and water out of and a part of what is commonly referred to as Pleasure Islet and being part of Tract 2, out of that certain (Called 92.563) acre tract of land conveyed to Pleasure Islet Associates, duly authorized by Resolution No. 81-188, dated July 13, 1981, of the City Council of the City of Port Arthur, and being out of that certain (Called 1877.94) acre tract of land conveyed to the City of Port Arthur, Texas, by patent, recorded in Volume 1014, Page 476, Deed Records, Jefferson County, Texas; being the same tract of land and water described in Correction Deed of Trust, recorded in File No. 2004048756, Official Public Records of Real Property, Jefferson County, Texas; said 8.926 acre tract being more fully described by metes and bounds as follows, to wit:

COMMENCING at a "MAG" nail set for the Southwest corner of Tract 3 of the (Called 92.563) acre tract;

THENCE, North 27 deg., 46 min., 52 sec., East, a distance of 800.00' to a "MAG" nail set for a common corner of said Tracts 2 and 3; continuing for a total distance of 1502.39' to a "MAG" nail set for the **POINT OF BEGINNING** and Southwest corner of the herein described tract; from which a ½" steel rod found for reference point, bears North 62 deg., 13 min., 00 sec., West, a distance of 30.00'

THENCE, North 32 deg., 07 min., 44 sec., East, a distance of 382.80' passing a ½" steel rod found for reference point; continuing for a total distance of 677.37' (Called 674.42') to a ½" steel rod found for the Northwest corner of said Tract 2 and the Northwest corner of the herein described tract;

THENCE, South 50 deg., 52 min., 58 sec., East, on the North line of said Tract 2, a distance of 396.02' to a ½" steel rod set, capped, and marked "SOUTEX" for the Northeast corner of said Tract 2 and the Northeast corner of the herein described tract;

THENCE, South 20 deg., 40 min., 04 sec., West, a distance of 196.56' to a ½" steel rod set, capped, and marked "SOUTEX" for corner;

THENCE, North 71 deg., 35 min., 34 sec., West, a distance of 73.64' (Called 72.68') to a ½" steel rod set, capped, and marked "SOUTEX" for corner;

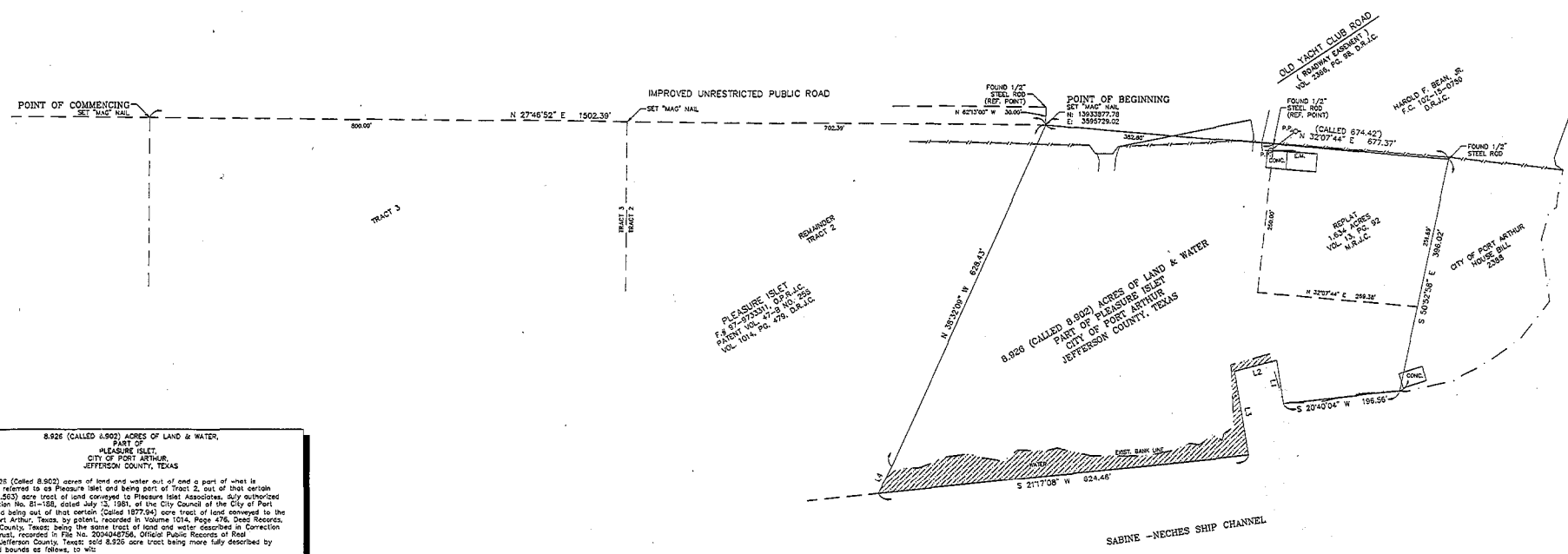
THENCE, South 13 deg., 04 min., 15 sec., West, a distance of 73.10' (Called 70.27') to a point for corner in the water;

THENCE, South 72 deg., 32 min., 42 sec., East, a distance of 143.67' to a point for corner in the water;

THENCE, South 21 deg., 17 min., 08 sec., West, a distance of 624.46' to a point for corner in the water; said point for corner being the Southeast corner of the herein described tract;

THENCE, North 36 deg., 24 min., 07 sec., West, a distance of 51.53' to a ½" steel rod set, capped, and marked "SOUTEX" for an angle point on the South line of the herein described tract;

THENCE, North 38 deg., 32 min., 09 sec., West, a distance of 628.43' to the **POINT OF BEGINNING** and containing 8.926 acres of land, more or less.



8.926 (CALLED 8.902) ACRES OF LAND & WATER,
PART OF
PLEASURE ISLET,
CITY OF PORT ARTHUR,
JEFFERSON COUNTY, TEXAS

BEING 8.905 (CALLED 8.902) acres of land and water out of and a part of what is commonly referred to as Pleasure Islet and being part of Tract 2, out of that certain (Called 92.583) acre tract of land conveyed to Pleasure Islet Associates, duly authorized by Resolution No. 81-188, dated July 13, 1981, of the City Council of the City of Port Arthur, and being out of that certain (Called 1877.04) acre tract of land conveyed to the City of Port Arthur, Texas, by patent, recorded in Volume 1014, Page 476, Deed Records, Jefferson County, Texas; being the same tract of land and water described in Correction Deed of Trust, recorded in File No. 200404756, Official Public Records of Real Property, Jefferson County, Texas; said 8.926 acre tract being more fully described by metes and bounds as follows, to wit:

COMMENCING at a "MAG" nail set for the Southwest corner of Tract 3 of the (Called 92.583) acre tract:

THENCE, North 27 deg., 46 min., 52 sec., East, a distance of 800.00' to a "MAG" nail set for a common corner of said Tracts 2 and 3; continuing for a total distance of 1502.39' to a "MAG" nail set for the POINT OF BEGINNING and Southwest corner of the herein described tract; from which a 1/2" steel rod found for reference point, bears North 82 deg., 13 min., 00 sec., West, a distance of 30.00';

THENCE, North 32 deg., 07 min., 44 sec., East, a distance of 382.80' passing a 1/2" steel rod found for reference point, continuing for a total distance of 877.37' (Called 874.42') to a 1/2" steel rod found for the Northwest corner of said Tract 2 and the Northwest corner of the herein described tract;

THENCE, South 50 deg., 52 min., 59 sec., East, on the North line of said Tract 2, a distance of 386.02' to a 1/2" steel rod set, capped, and marked "SOUTEX" for the Northeast corner of said Tract 2 and the Northeast corner of the herein described tract;

THENCE, South 20 deg., 40 min., 04 sec., West, a distance of 196.56' to a 1/2" steel rod set, capped, and marked "SOUTEX" for corner;

THENCE, North 71 deg., 35 min., 34 sec., West, a distance of 73.64' (Called 72.68') to a 1/2" steel rod set, capped, and marked "SOUTEX" for corner;

THENCE, South 13 deg., 04 min., 15 sec., West, a distance of 73.10' (Called 70.27') to a point for corner in the water;

THENCE, South 72 deg., 32 min., 42 sec., East, a distance of 143.67' to a point for corner in the water;

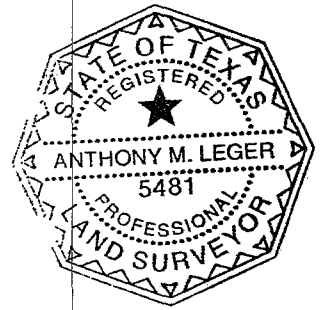
THENCE, South 21 deg., 17 min., 08 sec., West, a distance of 624.40' to a point for corner in the water; said point for corner being the Southeast corner of the herein described tract;

THENCE, North 35 deg., 24 min., 07 sec., West, a distance of 81.53' to a 1/2" steel rod set, capped, and marked "SOUTEX" for an angle point on the South line of the herein described tract;

THENCE, North 38 deg., 32 min., 09 sec., West, a distance of 628.43' to the POINT OF BEGINNING and containing 8.926 acres of land, more or less.

This description is based on the Land Title Survey made by Anthony M. Leger, Registered Professional Land Surveyor No. 5481, on October 9, 2006.

LS-06-1295



LINE	BEARING	DISTANCE	CALLED
L1	N 71°35'34" W	73.64'	72.68'
L2	S 13°04'15" W	73.10'	70.27'
L3	S 72°32'42" E	143.67'	-
L4	N 36°24'07" W	81.53'	-

DESCRIPTION OF SERVICE: LOCATE CORNERS AND SHOW IMPROVEMENTS

DATE: 10/24/06

THE UNDERSIGNED DOES HEREBY CERTIFY THAT THIS SURVEY WAS MADE BY ME OR UNDER MY CLOSE PERSONAL SUPERVISION AND THAT I AM A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS.

ANTHONY M. LEGER
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5481

FEMA Flood Zone: A8

Community Panel NO.: 485499-0020-E

Panel Date: 4/17/84

SOUTEX
SURVEYORS INC.

3737 DOCTORS DRIVE
PORT ARTHUR, TEXAS 77642
(409) 983-2004 (409) 983-2005

SURVEYOR'S NOTES

1. BEARINGS, DISTANCES, AND ACREAGE SHOWN ARE BASED ON STATE PLANE COORDINATE GRID SYSTEM, TEXAS SOUTH-CENTRAL ZONE, NAD83
SCALE FACTOR = 0.999922310
CONVERGENCE: 2' 31" 01"

SHEET TITLE

8.926 (CALLED 8.902) ACRES OF LAND AND WATER
PART OF PLEASURE ISLET, CITY OF PORT ARTHUR
VOL. 1014, PG. 476, DEED RECORDS
JEFFERSON COUNTY, TEXAS

PROJECT

GOLDEN TRIANGLE MARITIME, LLC.

PROJECT NO: 06-1295

SCALE: 1" = 100'

PRINT DATE: 10/4/06

DRAWN BY: JCH

CHECKED BY: BL

APPROVED BY: AML

SHEET 1 OF 1

FILED AND RECORDED

OFFICIAL PUBLIC RECORDS

Carolyn L Guidry

2011 Mar 25, 10:44 AM

2011010070

PEVETO: \$32.00

CAROLYN L. GUIDRY, COUNTY CLERK

JEFFERSON COUNTY, TEXAS

PART OF FOREGOING
INSTRUMENT ILLEGIBLE
AT TIME OF FILING

RESTRICTIVE COVENANT

STATE OF TEXAS

§



COV

2011010058

§

7 PGS

COUNTY OF JEFFERSON §

This Restrictive Covenant is filed to provide information concerning certain environmental conditions and use limitations pursuant to the Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program Rule (TRRP) found at 30 Texas Administrative Code (TAC), Chapter 350, and affects the real property (Property) described in Exhibit A, attached hereto and incorporated herein by reference, being the 24.178 acre tract of land, more or less, described in the General Warranty Deed with Vendor's Lien from Andrew Michael Slay Trust, et al., to NBR Maritime II, LLC, recorded on June 11, 2008, as File No. 2008020974, Official Public Records, County Clerk, Jefferson County, Texas.

Portions of the soils and groundwater of the Property contain certain identified chemicals of concern causing the Property to be considered an Affected Property as that term is defined in the TRRP.

This Restrictive Covenant is required for the following reasons:

The Property currently meets TRRP standards for commercial / industrial use. Based on the reports, the chemicals of concern pose no significant present or future risk to humans or the environment based on commercial / industrial land use. No further remediation of the Property is required by the TCEQ as long as the Property is not to be used for residential purposes. If any person desires in the future to use the Property for residential purposes, the TCEQ must be notified at least 60 days in advance of such use and additional response actions may be necessary before the Property may be used for residential purposes. Persons contemplating a change in land use for the Property are encouraged to review the definitions for commercial / industrial and residential land use contained in TRRP as the definition of residential land use is broad.

As of the date of this Restrictive Covenant, the record owner of fee title to the Property is NBR Maritime II, LLC (Owner) with an address of 12977 US Highway 84 West, Rusk, Texas 75785.

In consideration of the Response Actions by NBR Maritime II, LLC (Responder), approval of the Response Action Completion Report, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Owner has agreed to place the following restrictions on the Property in favor of the TCEQ and the State of Texas, to-wit:

1. The Property shall not be used for any purposes other than commercial / industrial uses, as defined in 30 Texas Administrative Code, Chapter 350, Section 350.4(a)(13).
2. These restrictions shall be a covenant running with the land.

RECEIVED

NOV 10 2011

2011-11-10 10:30:00

For additional information, contact:

TCEQ
Central Records
12100 Park 35 Circle,
Building E
Austin, Texas 78753

Mail: TCEQ - MC 199
P O Box 13087
Austin, Texas 78711-3087

TCEQ Program and Identifier Nos.:

1. Superfund SUP036 - State Marine of Port Arthur
2. Superfund SUP133 - Palmer Barge Lines

This Restrictive Covenant may be rendered of no further force or effect only by a release executed by the TCEQ or its successor agencies and filed in the same Real Property Records as those in which this Restrictive Covenant is filed.

Executed this 3rd day of March, 2011.

NBR Maritime II, LLC

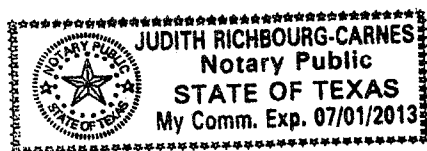
By: [Signature]
David Durrett, Manager of
New Birmingham Resources, LLC,
Manager of NBR Maritime II, LLC

STATE OF TEXAS

COUNTY OF CHEROKEE

BEFORE ME, on this the 3rd day of March, 2011, personally appeared David Durrett, Manager of New Birmingham Resources, LLC, Manager of NBR Maritime II, LLC, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 3rd day of March, 2011.



Judith Richbourg-Carnes
Notary Public, State of Texas
My Commission Expires: 7/01/2013

Accepted as Third Party Beneficiary this 18 day of March, 2011.

Texas Commission on Environmental Quality

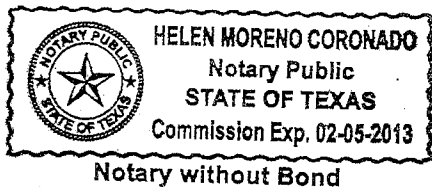
By: Brent Wade
Name: Brent Wade
Title: Director, Remediation Division

STATE OF TEXAS

COUNTY OF TRAVIS

BEFORE ME, on this the 18th day of March, 2011, personally appeared Brent Wade, Director of Remediation Division of the Texas Commission on Environmental Quality, known to me to be the person whose name is subscribed to the foregoing instrument, and they acknowledged to me that they executed the same for the purposes and in the capacity herein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 18th day of March, 2011.



Helen Moreno Coronado
Notary Public, State of Texas
My Commission Expires: 02-05-2013

After Recording Return a Certified Copy To:

TCEQ - MC 199
P O Box 13087
Austin, Texas 78711-3087

EXHIBIT A TO RESTRICTIVE COVENANT - Page 1 of 3
24.178 ACRE TRACT

BEING 24.178 acres of land and water out of and a part of what is commonly referred to as Pleasure Islet; being part of Tracts 2, 3, and 6 out of that certain (Called 92.563) acre tract of land conveyed to Pleasure Islet Associates, duly authorized by Resolution No. 81-188, dated July 13, 1981 of the City Council of the City of Port Arthur and being out of that certain (Called 1877.94) acre tract of land conveyed to the City of Port Arthur, Texas by Patent, recorded in Volume 1014, Page 476, Deed Records, Jefferson County, Texas; said 24.178 acre tract being more fully described by metes and bounds as follows, to wit:

BEGINNING at a MAG nail set for a common corner of Tracts 6 and 7 on the apparent centerline of an improved, unrestricted, public used roadway known as Old Yacht Club Road; said MAG nail being the Northwest corner of a tract of land conveyed to Pleasure Islet, L.L.C., recorded in File No. 9533086, Official Public Records, Jefferson County, Texas; also being the Southwest corner of the herein described tract;

THENCE, North 01 deg., 36 min., 36 sec., East, on the apparent centerline of said Old Yacht Club Road, a distance of 400.92' to a MAG nail set for point of curvature;

THENCE, continuing on the apparent centerline of said Old Yacht Club Road, on the arc of a curve to the right having a radius of 660.00', an arc length of 275.94', a chord bearing of North 13 deg., 35 min., 53 sec., East, a chord distance of 273.93' to a MAG nail set for point of tangency;

THENCE, North 25 deg., 35 min., 09 sec., East, continuing on the apparent centerline of said Old Yacht Club Road, a distance of 1545.41' to a MAG nail set for the Southwest corner of a tract of land conveyed to Golden Triangle Maritime, LLC, recorded in File No. 2007002282, Official Public Records, Jefferson County, Texas; said MAG nail being the Northwest corner of the herein described tract;

THENCE, South 40 deg., 34 min., 10 sec., East, on the Southerly line of said Golden Triangle Maritime, LLC tract, a distance of 628.43' to a point for corner on the Westerly line of the Sabine-Neches Ship Channel; said point for corner being the Southeast corner of said Golden Triangle Maritime, LLC tract and the Northeast corner of the herein described tract;

THENCE, the following calls on the Westerly line of said Sabine-Neches Ship Channel:

South 18 deg., 23 min., 58 sec., West, a distance of 432.92' to a point for corner;

South 20 deg., 55 min., 14 sec., West, a distance of 31.42' to a point for corner;

South 82 deg., 27 min., 12 sec., West, a distance of 75.04' to a point for corner;

EXHIBIT A TO RESTRICTIVE COVENANT - Page 2 of 3
24.178 ACRE TRACT (CONTINUED)

South 40 deg., 05 min., 02 sec., West, a distance of 434.26' to a point for corner;

South 20 deg., 44 min., 06 sec., West, a distance of 305.71' to a point for corner;

South 06 deg., 44 min., 20 sec., West, a distance of 265.15' to a point for corner;

South 19 deg., 33 min. 53 sec., East, a distance of 118.82' to a point for corner;

South 48 deg., 39 min. 56 sec., West, a distance of 226.84' to a point for corner on the common line of said Tracts 6 and 7; said point for corner being the Southeast corner of the herein described tract;

THENCE, North 88 deg., 31 min., 53 sec., West, on the common line of said Tracts 6 and 7, leaving the Westerly line of said Sabine-Neches Ship Channel, a distance of 130.14' passing a ½" steel rod set, capped, and marked "SOUTEX" for reference point; continuing for a distance of 350.41' passing a ½" steel rod found on the apparent East right of way line of said Old Yacht Club Road; continuing for a total distance of 380.14' to the **POINT OF BEGINNING** and containing 24.178 acres of land and water, more or less.

Note: Bearings, distances, and acreage are based on State Plane Coordinate Grid System, Texas South-Central Zone, NAD 3. Scale Factor = 0.999921866

FILED AND RECORDED

OFFICIAL PUBLIC RECORDS

Carolyn L Guidry

2011 Mar 25, 10:44 AM

2011010068

PEVETO: \$36.00

CAROLYN L. GUIDRY, COUNTY CLERK

JEFFERSON COUNTY, TEXAS

PART OF FOREGOING
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